Wandering A[illegible]otten Isles

by

Jesse Metcalf

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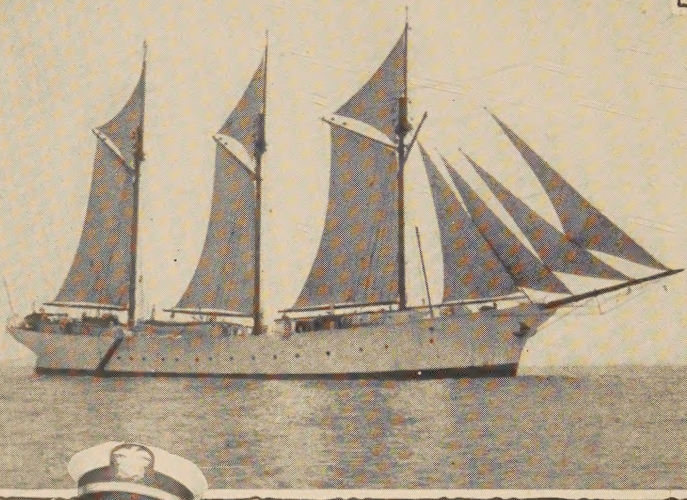

The WAWALOAM and her SKIPPER

Wandering Among Forgotten Isles

By

JESSE METCALF

With a Chapter on the Scientific
Results of the Cruise

By ROBERT CUSHMAN MURPHY, D.Sc.

Illustrated

Tennessee

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To

Those of My Relatives

Friends

Acquaintances

and

Any Others

Who

Think I Started

Loafing

on

March 20th

1926

FOREWORD

For many of the best illustrations in this volume, thanks are due to the generous courtesy of the American Museum of Natural History.

This short paragraph cannot encompass even a small part of the author's appreciation of Dr. Robert C. Murphy's assistance. Not only did he cheerfully contribute a review of the results of the voyage from a scientific standpoint, which could not otherwise have been properly written; he studied the manuscript from start to finish, and by his suggestions, kindly criticisms and, above all, encouragement, enabled the author to "endure to the end."

J. M.

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WANDERING AMONG FORGOTTEN ISLES

INTRODUCTION

A FEW months ago it was brought home to me by a certain lady—quite an old friend next to whom I was seated at dinner—what in most Americans' eyes are the requirements for the justification of a U.S.A. male citizen's existence.

Said the lady,

"Well, you've had a lovely long vacation, haven't you?"

Somewhat nettled at this, I answered:

"My dear girl, please believe me that it was work, hard work; many a night we kept going under not so pleasant conditions and in intense heat until anywhere from eleven to two thirty o'clock."

"Yes?" a little doubtfully, "but then it was what you preferred doing."

That's it! Not whether what you are doing is useful, but whether it is highly profitable—and above all, doing it must be odious to you. Otherwise you are not a hundred per cent American.

Still, to go to old and distant places, to see old and strange things—that surely has been the ambition of every romantic young heart—and all young hearts are romantic. But in the searing commercialism of this workaday world the aspiration usually grows dim with the passing of the years, till it is but a hazy dream—if indeed it does not fade out entirely.

The expedition (if it may be dignified by such a title) of which the events are recounted in these pages was the result of the survival of such a desire, long cherished in spite of the imagination-throttling influence of "merchandising."

In Canada, more years ago than it is pleasant to count, I met, for the second or third time, Dr. Robert C. Murphy, D.Sc., then connected with the Brooklyn Museum. He and Mrs. Murphy were returning from an expedition in Lower California and had stopped off at Lake Louise. They had just come off the glacier where they had seen as many as five harlequin duck together and were bubbling

over. It seemed it was something to be enthusiastic about. Of course I didn't know then. . . .

Bob has admitted that he never could understand why I kept pestering him after that. He doesn't call it pestering, being very polite, but that is what he meant. Presumably he could not suspect anything more than academic interest in his own line of endeavor from one so imbued with the traditions of—trade.

It took years to convince him that I was sincerely interested in going "afield." Indeed it is doubtful even now whether he is really certain of any abiding ambition deeper than seeking communities where Mr. Volstead's well-known Statute does not hold sway.

But eventually he was won over to the extent of consenting to associate himself with a very modest cruise—introductory as 'twere—in the Mediterranean.

Professional duties required Dr. Murphy's presence in Copenhagen in May. Consequently if the Mediterranean trip was a total loss, he would be able to assuage his conscience with the reflection that he had not gone very much off his course. Scientists do not go on vacations, they simply take

them as—and if—they come. But in his summary Dr. Murphy will tell all about this—to what extent he considered the voyage valuable and to what extent it was merely—a vacation. Consequently to him I will leave the objects as well as the results.

Following the first section of the trip, when the Murphys must leave to return to the United States, it was planned to recruit one or more professionals to replace the invaluable Doctor, in an endeavor to locate about the Madeiran group, some remnants of the colony of the Monachus seal, supposed to exist thereabouts. But for the Mediterranean venture the personnel consisted of Grace and Kay (our wives), Miss Payne, whose company was a pleasant surprise, and facility with pen and brush invaluable, and Miss Williams, our secretary. It was agreed that we should meet in Monte Carlo as near June 15th, 1926, as possible, and to this end—

(now go on with the story)

CHAPTER ONE

The Search for a Ship

OBVIOUSLY the first thing was to get the ship. A small matter this. Simply to collect reports on two or three-masted auxiliary schooners, of say two hundred and fifty tons burthen and perhaps one hundred and fifty foot length, look over a few of the most likely and make a selection. But strangely, a canvass of New York and vicinity revealed nothing. That is to say nothing but beautiful, trim, shell-thin yachts, dainty ladies with three suits of spotless, bed-sheet weight sails, towering toothpick masts and golden binnacles. Or, as an alternative, sluggish, round-bellied, wide-hipped frowsy crones of coasting schooners, with scarce a rag to their backs.

Going further afield, the New England coast was scoured, and even the bank fisherman type looked into as far north as Nova Scotia. But even the brokers would not recommend for the purpose in view any ship that had brought in so much as one

precious cargo from the Grand Banks. All whose opinion was of value were unanimous in declaring that no fumigating, relining or any other expedient could ever eradicate the pervasive odor of a hold which had held codfish for three months.

As to new boats of this type still on the ways and available, they were but few in number and in one point or another were not desirable. Most were too small, a few too large, but the prevailing difficulty was their sharp sheer, giving them little freeboard amidship. The bank fisherman does not of course lower his dories overboard when leaving the ship to spread his nets. He has no davits—the boats are "nested" one within another and dumped overboard when the time comes. Hence the contour at the waist of the ship. The fisherman is thoroughly wet most of the time anyhow, so it matters little to him that, particularly when his ship is rolling in the trough, every other wave sluices across the decks.

During the many weeks, even months of this fruitless quest, alluring reports had been coming in from London of vessels to be had on the other side—alluring if somewhat hazy.

Others may vaguely remember the horror of that

unutterably piercing cold in London and South Eastern England during the latter part of November and first few days of December, 1925. As for Kay and me, weeks after we often awoke from a shuddering nightmare of those ice-house hotel rooms.

At the station hotel in Southampton—the "Great Western"—we spent one night between mattresses so thick and piles of comforters so high that we felt like the filling in a night lunch cart sandwich.

If all the "prospects" in and about Southampton were to be investigated in one day it behooved me to be about at an early hour. So as "England's sun was growing dim"—as it rose higher into the smoky fog, or foggy smoke—there was a frantic leap for the wash hand stand, a smart slapping "here and there" with a wash rag, which entirely absorbed the half pint of hot water left by the maid, and a deeper ablution of head and hands in water which made the hair crackle and the fingers numb—then quick if clumsy dressing and a burning cup of tea raised with a shaking hand.

First off Mr. Clayton of Cowes, Isle of Wight, must be 'phoned to. The switchboard was finally discovered lurking at some distance behind the

news stand or whatever it is called in "English." A telephone directory was asked for and soon obtained, though there was some slight misunderstanding as to the correct terminology by which to identify this interesting publication. Here we are—Cowes—fine! Now the "C's"—that's it Ca—Cc—C—Clayton W.R. 2008.

Now the plural of the female of the species is "Cows" and is so pronounced. Perhaps for this reason or perhaps through a feeling that such a pronunciation was undignified for the home port of the Royal Yacht Squadron, my mental rendering of "Cowes" (never having heard it pronounced) was "Coes." The operator was very busy there in the back—too busy for some time to give her attention elsewhere. But, must be careful—must not be impatient or give any cause for offense—too much prejudice against Americans now. Soon she turned and in my best English I said:

"Coes—two—O—O—eight." She looked puzzled—saying nothing. Careful repetition—"Coes—two—O—O—eight." Very quietly she got up and came over to look at the line indicated.

"Oh," she said, "you want twodoubleOeight Cows,"—just like that.

Properly abashed I waited while she plugged and "Areyouthere?" Shortly she turned her head and said "One booth."

Judging that this was a hint that my number would presently be put through booth number one, I set out for a still hunt for it, to discover it eventually in the bar—it was the only booth in the hotel!

Despite repeated "Are you there's" and even a number of "hello's" nothing came in over the wire but a lot of static.

Back to the news stand again—must be patient—must be courteous—too many Americans, etc.

Soon the lady of the ear muffs turned again and exclaimed, not shortly but very quickly, "You're through."

"But I didn't get anyone."

"I say, you're through now."

"But you don't understand . . ."

"Yes, I know, but *now* you're through."

Then it dawned on me. Quickly to the booth.

Several yachts were inspected that day in and about Southampton, but nothing even possible discovered amongst all the craft that lay snuggling

in their muddy beds on the banks of the several inlets and creeks visited.

So to London that evening and a busy round next day, delivering letters of introduction to yacht brokers and others. They all had most formidable lists of vessels for sale. But of them all, only two, located in English waters, appeared to show any possibility of filling the bill.

Fortunately these were at the same port—Brightlingsea. So eight fifteen the next morning found us floundering in Euston or Victoria, or King's Cross or some station, trying to locate the train to Brightlingsea. This we succeeded in doing, —also in [obtaining an empty first-class compartment just as the guard was slamming doors and emitting his version of Tyrolean yodeling.

Ordinarily I mind the cold as little as anyone outside of an Arctic explorer—provided I have enough between the outer air and my immediate person. On this occasion my undergarments (if you will excuse my mentioning them) were so thick that they did not fold—they bent. Add to this an enormous wool shawl and fur coat. As for Kay, she probably had on—exclusive of a fur

coat—exactly what she would have worn on the beach of a summer resort.

We stuffed all the windows with part of the *Times* and wrapped the rest, of which I had not even read the agony column, around our chests under our coats. Then we sat down as philosophically as possible to freeze to death.

But we didn't; indeed when we got to Brightlingsea two hours and a half later we were not much colder, due largely, in all probability, to the fact that we had not moved a muscle—we couldn't. When we didn't get down, the guard came along and pulled us out and let us drop on the platform.

It was resolved to walk—as there was no other method of transportation available. The shipyard was not upwards of half a mile distant, and the snow inconsiderable as to depth if one stuck to the narrow path, keeping bent well forward in order to come face down and not on the back of the head in falling.

The captain of one of the yachts we had come to inspect was finally located in a pub—it was by now the noon hour—and he came out wiping crumbs off his mouth with the back of his hand, and emitting

fumes which seemed somehow to spread about a warming glow.

His ship, the *Halcyon*, was moored between but some distance from, two docks, so it was necessary to cross a gangplank some twenty feet long and about eighteen inches wide, coated with ice and consisting of two slender boards, so that as you walked, one board came up as the other went down.

This vessel made rather a favorable impression, very stocky and sturdy looking, yet clean-cut withal. Against this she was rather over-sparred and of composite construction.*

Meanwhile the captain of the other yacht had been dug up—his appearance indicated that he preferred bed to a grog shop. *Allah Karim* lay over against the opposite bank of the muddy inlet so that it was necessary to go over in a dinghy, not thereby getting any warmer.

Very seagoing, *Allah Karim* looked; sensible, semi-clipper bow, high rails, giving her lots of freeboard, conservatively sparred. Good make

*It is curious that the British build so many of their vessels this way, as it seems impossible to find anyone really experienced in the matter to give any but a very qualified approval of the method.

and well powered engine, but placed amidships—gas in the bilges—not so good, that, in a wooden ship.

The train which took us back to London considerately stopped at a junction for fifteen minutes, and while we thawed out and drank quantities of the beverage "that cheers but does not inebriate" we decided that while English hotels might be cold and English trains colder, there had not yet come to our attention anything so horribly tomblike in its chill as a small yacht laid up in a frozen mud bank or anchored amidst floating ice.

It seemed hard to accomplish anything—largely because most everyone appeared to be in one way or another "under the weather," which wasn't to be wondered at—in view of the weather. So after fussing and fiddling for a couple of days, trying to get this one to say if he would sell and that one to name a price, we abandoned a tentative plan to run up to the Clyde, and pulled stakes for Paris.

It had been our intention to lay up there for but a day or two, awaiting definite advice as to just where one or two craft, reported variously as at Cannes, Nice or other points on the Riviera, were

really to be found. We heard nothing of them—perhaps they were frozen in. After all, it was just as well, as the vessels in the Mediterranean were afterwards authentically reported as being not at all our meat.

Before leaving London it had been arranged that the reputed dean of naval architects should go to Brightlingsea, inspect the two yachts, then come over and make a personal report in Paris.

On the day before we were to leave for Cherbourg and Christmas at home, Mr. B. was announced. Appeared then a noble figure of a man of some sixty-four or sixty-five summers, and nearly the same number of inches in stature, white on top where there was any, and with a perfectly splendid flowing white mustache. Unlike the supposed run of Scotsmen, he exhibited a quite excellent girth.

In Mr. B.'s opinion, the *Halcyon* and the *Allah Karim* were out—they weren't suitable. No need to enter into details as to why. Far more interesting to inquire into why people stutter. Sometimes no doubt it is organic, or congenital, or constitutional, or whatever you want to call it. More often it is sheer nervousness or self-consciousness,

or not having anything to say. In Mr. B.'s case it was not the last. He had everything in the world to say, or thought he had, but he wasn't always quite sure what it was, so that while he was getting under way it was necessary for him to make some sort of a noise, in order to suppress any possibly contemplated articulation on the part of anyone else. During our conference practically all of Mr. B.'s remarks were prefaced something like this:

"Buh—buh—buh—buh—Mr.—Mr.—Mr.—Mr.—muh—muh—but Mr.—muh—muh—muh—Metcalf"—and he was launched.

We parted pleasantly after a couple of "twa finger drams" with the understanding that Mr. B. was to make inquiries for a suitable vessel.

Early in January, my good friend Mr. B. M. Collins of London, who had most kindly interested himself in assisting our search in every way possible, cabled that Mr. B. had located three ships, any one of which ought to prove suitable for our requirements and suggested an immediate "hop across" to inspect and decide.

This was out of the question at that time. It is

generally understood that if anyone suggests a three years, exploration trip one evening, you should wander casually home in the moonlight, throw your gear into the old kit bag, your troubles out of the window and sleep like a babe for nine or ten hours. It was my experience that for an eight months' trip, three months' preparation was necessary, and that the last three nights had to be practically sleepless.

We kissed the statue (of "Liberty") good-by on March 20th, 1926, and (of course) landed in Southampton in just six days—plus the few odd hours that are not supposed to count.

Mr. B.'s address was 1 Bury Street. There are four George Streets in London, but who would expect four "Bury's"? At the first 1 Bury Street, the only architect to be found was Berry Brothers—long famous for the quality of gin they design. Gradually 1 Bury Street, St. Mary's Axe. City—and Mr. B.—were found. The old chap was located in a desk toward the end of a long room filled with typewriters which made such an infernal clatter that it did not seem as though it would be possible to think or write, much less converse amidst such

a racket, particularly with one who did not understand American very well and had an unfortunate impediment (?) in his speech.

Mr. B. managed to convey, however, that of the three vessels recommended by him, only one, the *Ida IV*, was then in British waters, at sea with a load of lumber consigned to West Bay below Dorchester on the East Coast. Time pressed. There was none to spare in which to go poking about Continental ports. Haste—that above all must be the watchword.

We went around to the offices of the ship broking agents for the sale of the *Ida IV*. The head of the concern was a dumpy little man, about as tall in bed as on his feet and with no neck to speak of. Just the same he was amazingly full of vigor and activity. He snapped one of the clerks on to the wire to get us reservations in Bournemouth, another over to the "A.A." for a detailed routing by road to Dorchester, a third to make arrangements for a car—all in a staccato abrupt manner that certainly got results. Everything worked out with almost mechanical perfection. At nine o'clock the next morning, and a gorgeous one it was even in London, a perfectly-appointed Daimler purred

almost noiselessly at our hotel entrance, and five minutes later a neat liveried runner of the Automobile Association appeared with a neatly bound printed pamphlet describing every inch of the road, its condition, position of traps and other dangers, the nature of the country to be traversed and all points of interest en route.

Passing the night at Bournemouth we made an early start the next morning and so could take our time over the beautifully rolling country of the Dorchester region, arriving at the station in West Bay to pick up Mr. B. in the early afternoon.

Ida IV was still unloading at a dock. She presented quite a trim, though sturdy appearance, and her hull, well out of the water by now, gave every indication of good condition and care.

A local shipyard owner with his foreman and engineer were on hand to meet us, and together we spent three hours going over the vessel and discussing ways and means.

Captain Jan Westers, owner and captain of the ship, had a charter for a load of gravel to Leith, Scotland, and when we got back to London and compared the West Bay shipyard's estimate with those received from firms in Scotland, it seemed

THE "WAWALOAM" BEFORE AND AFTER RECONSTRUCTION

better to let the ship carry out her charter and take her over in Scotland if results of inspection were satisfactory.

Many were the estimates received from Scotch firms and many and long were the meetings with their representatives held at the ship brokers' offices,—and we learned why there are so few Jews in Scotland.

Since the vessel had to complete unloading, wait the tide to move to the nearby gravel bank, load (with three sizes of gravel so that temporary bulkheads had to be put in), and then make her way clear up the English and part of the Scottish Coast through the ever uncertain tides and currents of the English Channel, some time need elapse before she could arrive in Leith and so make our presence there imperative.

Finally word came that the ship was somewhere off Newcastle and on April 15th we took train for Edinburgh.

Ida IV must have done very well from Newcastle on, for she came in, was tied up to the wharf, and when we got down to Leith the next morning (Friday) the big scoops were already transferring the gravel to the dock.

Early on Saturday morning we called on Clareaux & Sanderson, Wester's Agents, with the object of opening negotiations to secure the coöperation of the stevedores to complete unloading by Tuesday night.

Clareaux was a very thin, very straight man in his sixties—typically Scotch even without his very Scotch plaid suit. He made no doubt of the stevedores working that afternoon and even Monday—which of course *had* to be a holiday—in consideration of the extra remuneration.

No trace of accent was in the man's speech, until an unfelicitous suggestion was made as to the possibility of the men working on the next day. Then Clareaux seemed to grow if possible thinner and straighter and taller, as he paused for a second before replying, then, with a withering look, "Mon, dae ye no ken the morn's the Sawbath?"

Anyhow the men worked that afternoon and for their day's work did not seem to have made a hole in the tons and tons of gravel in the holds. But by Monday night things looked more promising. There were some bags of bark to be got out and noon of Tuesday looked hopeless. Our only chance of saving a day lay in getting the remaining

eighty tons out that afternoon in order to catch the tide and get up fifteen miles to Grangemouth, to the dockyard.

It had to be done, and was accomplished by a very fair example of what pestering can achieve. Sanderson was dubious and the stevedore boss shook his head and finally suggested that an effort be made to catch the morning tide. Fortunately, perhaps, that made me wild, and I said I wouldn't pay a damn copper to catch the morning tide. Pretty soon the stevedores' boss was missing and then Sanderson was missing, and there was a kind of lonely feeling around there. And then Clareaux showed up, looking worried and emaciated. And then the stevedore boss came back and bye 'n bye Sanderson. It was ten minutes to five, quitting time, and ten tons of "peas," as they call the smaller size gravel, to be discharged.

The stevedores didn't exactly look like cut-throats, but they were a fairly average hard-boiled looking bunch of stevedores just the same. Sanderson whispered to me that he was trying to get the men to work extra time right through till seven without stopping for their tea! I believe I would have become hysterical on the spot, only just then

the shovels stopped their scraping, the crane ceased its swing and the boss stevedore held a short parley from on deck with the men below. Of it all, I could understand only the last cheering words:

"Agreed, Angus?"

"Aye."

"Agreed, Davie?"

"Aye."

The shovels scraped again, the crane swung and all was well. They worked it out and we swung out toward the gates with time to spare.

Going through to the Forth was slow work. By the time we reached the second gates, the big drawbridge which would face us after we got through the gates, after a right angle turn to the left, appeared to be closed for the night. Finally we slipped through the gates, and turning faced the bridge. No doubt the pilot knew—either he saw better or knew better the meaning of what he saw. Anyhow he called to the captain to go ahead, though none of us could distinguish any indication that the big mass almost towering above us was about to move.

Well of course the tragic, comic, and obstinate muses could not combine to produce anything more

intriguing than a Dutch shipmaster, a Scotch pilot and an uncertain drawbridge, just at dusk. The language was utterly unprofane, even in a sharp way courteous, but a very certain tension was obvious, not at all lightened by our early passage out into the Forth, or our smooth uneventful voyage up the river.

We passed under the wonderful Forth Bridge, traced like a black fairy cobweb against the silver face of the moon, and came to anchor below the mouth of the Carron, having been delayed too long at Leith and so missing the tide into the Carron River, on which is situated Grangemouth and the plant of the Grangemouth Dockyard Company, which firm had been awarded the contract to refit the *Ida IV*. So we climbed down the ladder into the Carron River pilot's boat and then motored back to Edinburgh.

A scant four and a half hours' sleep was all that we could allow ourselves before setting out again, at exactly seven fifteen for the twenty-two mile run back to Grangemouth.

What happened after we left the ship about one o'clock can only be surmised from an estimate of the natures of the principals. The captain's story is:—

"After a little while, the pilot from where he was lying, began to moan and grumble, saying the ship was damaged, finally rising and walking around, moaning and muttering the more. The captain became more and more upset and eventually at five o'clock, launched a boat and sent ashore to summon a doctor and an ambulance to take the 'madman' to hospital in Edinburgh." That this was actually done has been verified, but just what the trouble with, or condition of the pilot was, can, as suggested, only be surmised. My suspicion is that the captain hit him on the head with a chair!

It was now April 21st and if we were to make our rendezvous at Monte Carlo on or about the middle of June it meant that we should sail from Grangemouth not later than May 16th. Of course that was out of the question, but could it possibly be made by June 1st? It was appalling to contemplate the work to be accomplished in such a limited time.

Here was a steel hulk with three good masts and a main engine—just that and nothing more. From the forward watertight bulkhead to the after one she was one long hold covered with a steel deck pierced by two cargo hatches. The forecastle and

tiny galley were on deck and were interiorly rotten and filthy.

The line of the after bulkhead rose up about six feet, thus giving two deck levels within the poop containing the officers' quarters also rotten and filthy, the lower being the engine space. The engine was a four-cylinder Densil (Danish) semi-Diesel type.

In order to convert this skeleton, not into a "palatial" yacht—such was not the intention, but to make of it a seagoing livable vessel, where one could be reasonably comfortable and have some quarters and equipment for scientific work: What had to be done?

To go into the details of all this would be tedious and unprofitable, but in order to emphasize the really tremendous task ahead, it might not be amiss to outline briefly the chief items to be accomplished.

First, then, as the vessel was designed as a cargo carrier it was necessary to have some bulky substance as ballast, to keep her down in the water. It took two hundred tons or nearly 5000 pigs of iron to put the vessel down to the point that we believed would be most satisfactory—giving her a draft of 8 feet 9 inches forward and 9 feet 3 or 4 inches aft.

Leaving headroom of about four and a half feet, a deck had to be put in as a floor for the living quarters. This offers an example of the problem we were up against continually—the difficulty of not letting one piece of work delay another. In this case it was of vast importance to get this flooring down so that the partitions and other joiner work could be got in with the least possible delay, and as the stowing of the ballast was necessarily a rather slow job, a hole had to be left in the floor to be filled in later.

So right through, every effort had to be made to coördinate the work in order to keep it all at the same stage of advancement.

To this end, a sort of budget-calendar-schedule was created, showing to just what point each part of the work should advance day by day, and just when each piece of machinery and other supplies coming from a distance should arrive. This was checked up every night after working hours and proper steps taken to adjust where things were out of line.

The work on the new deck consisted in building in six staterooms containing seven bunks or built-in beds; a large dining saloon, a library, bathroom

and extra toilet room, pantry, two stewards' rooms, ice chamber and cold storage chamber, insulated, space for refrigerating machinery and batteries, wine room, gun room and laboratory.

The plans called for a galley and a breakfast room to rise from the fore hatch, with a companion leading into the main saloon below. This house to be riveted to the hatch coaming.

Over the after hatch was planned a three-sided shelter with companion to lower quarters.

Added to this the crew's house and officers' quarters had to be completely gutted and relined and an entire oak deck laid while all the other work was going on.

But by far the most stupendous task was the machinery problem. As she stood, the *Ida IV* had no auxiliary power except a terribly antiquated gas engine for the cargo booms. The anchor was hoisted by a hand windlass.

In her new position in life, the *Wawaloam*, for such she was to be rechristened, would require wiring and power for light, hoisting anchor and sails, and refrigerating machinery. The machinery installed consisted of two one-cylinder engines that could be uncoupled or run as a single unit, a 7 H.P.

dynamo for each engine, an 8 H.P. dynamo for deck work, one hundred and sixty wet cells or "accumulators" and a complete refrigerating outfit with its own special dynamo.

And all these various pieces had to come from as many different points in the United Kingdom.

April ran out, and despite terrible weather conditions—almost continual rain, hail or snow, the job seemed to be progressing at a reasonably rapid pace, though somewhat by fits and starts.

About this time, the publicity which the "Mystery Ship"—as they persisted in calling her—had acquired in Glasgow papers, began to bear fruit in the shape of all sorts of letters. Some of them made sense, but mostly they were cuckoo. Among the latter were some from homesick and impoverished Americans. They spoke in maudlin fashion of the Stars and Stripes and seemed to feel that it was my duty as an American to repatriate them.

Came the morning of May 4th, heralding the week which was to cause the United Kingdom vast millions of financial loss and incalculable damage commercially and industrially for months if not years to come.

The eight day revolution of May, 1926, is too

recent, and consequently its events too fresh in people's minds for any résumé to be necessary here, and it will only be referred to as it affected the progress of work on the ship.

We were now living at Bridge of Allan, and up till the General Strike it had been possible for me to get a train which, with one change, would land me in Grangemouth at about twenty minutes to nine. Now of course it was necessary to motor. This was expensive, and wearing on the nerves as well, because our road lay through a string of mining villages and crowds of sulky looking strikers who gave way reluctantly with sullen expressions, though we were never once molested.

Although by this time some £2000 had been sunk in the ship, the actual purchase had not been completed because there was a big mortgage against the vessel, and Westers was unable to close the Dutch Registry and show a clear title. With utter unreason he had been insisting on getting his money nevertheless, and when refused would fly into a fit of passion that threatened to explode his already distended belly and cheeks.

One morning he came up out of the after quarters,

beaming, carrying some papers very much in the manner of Old King Cole holding his scepter, and breathing assurances that "now dee paapers hev koom." As they were in Dutch no one else could make anything of them, and though Westers' translation of them sounded like a lot of tripe and I did not see how he could clear his title without payment for the vessel having been made, or the money deposited at least, I decided to take the matter up with the lawyers in Leith.

Despite the great crowds of strikers and the severe rioting of the previous evening all was quiet on the road to Edinburgh, through the city and in Leith.

Once the papers were translated, Messrs. Blackstock and Rose threw Westers' case right out. Whereupon the latter had a twenty minute fit that threatened immediate apoplexy.

From this time on Westers behaved in the most absurdly spoilt-child way imaginable. All smiles one minute, spluttering and storming up and down the next, commanding that all work should be stopped forthwith. "Mr. Miller," he used to say to the harassed Yard manager, "I demand that you take the gangplank from off mine ship." A lot of good she would have been to him with her

hatches demolished and about ten portholes cut in her side! It got to such a point that I believe some of the people around the Yard really thought that I was trying to gyp the silly ass out of his money.

Finally a deposit was arranged, the papers came and I could have fallen on the fat fool's neck and kissed his two ruddy cheeks and cried for joy when the motor came to take him away.

Of course the strike meant that we had to devise means of getting our supplies delivered in some way independent of the railroads and of most steamship lines. Too many and devious were the expedients resorted to, to recount them all. The refrigerating machinery, we got through from London on to the Carron River steamer, after trucking it from the plant to the dock in an antiquated pony cart which still showed the remains of a coronet emblazoned on the rear door. Our motive power on this occasion was a very tall mule. He was amazingly thin, but still too wide for the shafts. In an effort to spread them, one broke. That solved the problem—indeed worked out very well—because the mule wasn't exactly ambitious and whenever his pace dropped below a certain

point, the jagged butt of the shaft was likely to give him a prick in the leg.

One dynamo was got through some bad country in a flour barrel by bribing the driver of a food truck—with these the strikers did not interefere.

Had the Shipyard people gone on strike, of course our goose would have been cooked. Fortunately, however, they had never been in agreement or affiliated with the T.U.C.* so that as far as local labor conditions went, there were no difficulties. Nor was there any trouble between the Shipyard men and the Dockyard workers who were all out on strike.

In this connection, a very interesting incident occurred. When the strike was called there was a quantity of lumber for the decks in the freight depot, and of course this was immediately put under an embargo and locked up. On Thursday, Aikman (Manager of the Grangemouth Dockyard Company) and I went up to confer with the Transportation Union's committee. To me it seemed a fool's errand. "These damn Socialists are trying to tie up all the industry of the U.K.," I remember

*T.U.C. Trades Union Congress, the Bolshevik association that sponsored the General Strike.

saying to Aikman; "you don't think they are going to release building material at such a time?"

The committee received us civilly enough, even asked us to be seated! Aikman stated the object of our visit in a few words.

The Chairman considered a few minutes before asking.

"Mr. Aikman, if this lumber is not released will your joiners be laid off?"

"Not the joiners, Mr. X., this is a carpenters' job."

"Well, the carpenters then."

"I am afraid that would be unavoidable, we have no other work for them at the present time."

The Chairman reached for a pad, scrawled a few lines and handed over the paper.

It is pleasant to be able to record one gracious act, at least to their own kind, on the part of the men who were trying to smash the Empire.

Despite the conditions engendered by the strike, truly remarkable progress was made, and had it not been for one essential engine part going amissing, lost at some depot in the indescribable chaos following the strike, it is probable that a departure might have been effected on June 1st.

As it was, we felt some little gratification that in the face of all obstacles and difficulties we were able to sail from Grangemouth on the fourth day of June.

Buy a plot of land with the foundations of a home on it. With the aid of your architect or builder draw up plans for a modest home. Build a house of two or three general rooms with fitted hard wood floors, and at least five bedrooms and necessary servants' rooms and domestic quarters. Install electric light and bell wiring, a furnace, a fully equipped bathroom with all plumbing complete. Furnish it throughout, from carpets to toothpicks; build tanks to contain a supply of water for twenty odd persons for thirty days, stow away fresh and dry good stores of similar dimensions, and if in less than seven weeks you can move in, and conscientiously say you have a livable and comfortable place, you will have approximated what was accomplished on the *Wawaloam*.

CHAPTER TWO

From the Firth of Forth to the Balearic Isles

WHEN finally the long awaited day arrived and at 9 P.M.—the sun just setting—we were towed slowly down the muddy Carron, the entire town lined the shore to see us off.

The pilot and tug dropped us at the entrance to the Forth. We lay in and anchored for the night.

At an early hour the next morning we were under way, swinging ship with the compass adjuster. At last the moment came for the adjuster, the British Corporation Surveyor, Mr. B. and Aikman to depart. The ladder was over the side, a launch awaited at its foot. What more possibly dramatic moment could a detestable jinx have picked to put in an appearance! He swooped down, or rather popped up in the shape of a little jet of steam, through a cracked cylinder head. To make a sad story as short as possible, it was decided to continue on the wind while the engineers replaced the cylinder head. But unfortunately there was no

wind, so we anchored in a thick fog in one of the bays in the mouth of the great Forth, while all through the night steamers boomed at us.

Early in the morning, just as we had got under way, came a deep rumble from off our port quarter. We barely had way on and could not maneuver—there was nothing to be done but sound our hand foghorn as the steamer's blasts seemed getting nearer and nearer. We could hear the pulsations of the screw and suddenly the engine room bell, the beat of the wheel ceased and then was renewed with increased speed, denoting that the steamer was going astern. Suddenly like opera curtains, the fog parted and there lay a magnificent fifteen or twenty thousand ton C.P.S. passenger liner about a quarter of a mile away! And we had thought to be in momentary danger of being run down. It was easy to picture the scowl on the "old man's" face when he realized that he could have kept at full speed on his course without ever being any nearer to us than he was at the moment.

Sometimes with, more often without our engines, we made the best of our way to Wick, outside of which we anchored on the morning of June 9th—main engine entirely broken down. Fortunately

we did not stay out in the open where we were, but the next morning took a tow in amongst what, seen for the first time, appeared to be a perfect labyrinth of breakwaters and jetties. We tied up alongside a quay beneath the gaze of an assembly of probably three hundred people—and about ten million gulls. I have shot geese in the swamp of Cosala, when the report of a gun would cause such oceans of birds to arise that a shadow fell like a cloud crossing the sun, accompanied by a roar as of the surf on a pebbly beach, but I had never imagined such a vast number of sea birds as these gulls at Wick.

Coming in we had seen the advertisement of some guano company or other, and in view of the great number of gulls, gathered that the manure came from them, particularly as the gulls seemed to have a rookery out on the point, where great quantities of the material might have been secured. We were soon corrected—the product is the entrails of the herrings, the catching and packing of which constitutes Wick's sole industry. So tame and so forward are these gulls that when the fishing boats arrive in the mornings, the birds crowd the gunwales, awaiting their opportunity to jump down

and steal the fish as it is being transferred to the shore. As we had no such luscious cargo they gave us practically no attention, only a few hundred or so paying their respects by perching in the rigging and dropping their calling cards on deck.

Some of these Wick gulls were larger, I believe, than any chickens I have ever seen at a poultry show. So powerful and aggressive are they, that if a shipment of barreled fish with burlap covers stretched and nailed is to be left outside for even a short while, a guard is mounted with a stick to keep the birds off. Several of the "leading citizens" of Wick assured me that if a barrel covered as I have described were left alone, its entire contents would be abstracted within a very few minutes.

These big gulls have the most amazing cat-like calls: weird and strident, yet obviously amorous in nature—full of passion. One day I watched and listened to two of them "talking" on the end of a string piece on the jetty. They "billed" and "cooed" in raucous tones within a few feet of me. Suddenly with wild cries, another huge bird swooped down with open beak and glaring eye, driving away one of the gulls and taking up its

place beside the other, and apparently commencing an *affaire du cœur* of its own.

The people of Wick were most courteous and kindly. Such a thing as a sailing ship has not reared its masts amongst them for years, and naturally they were curious. They continuously lined the side of the quay, yet we never heard one unpleasant comment from anyone. Hundreds of children came, but even they were in no way boisterous. They peeped, but they did not even patter, except in low tones to each other, and neither adults nor youngsters ever attempted to come aboard unless they had proper occasion.

It was, as has been intimated, fortunate that we had come into the harbor, as an easterly gale soon came up, rolling in great seas, that, crashing against the jetties, shot high into the air to fall backward on the next inrushing one and so caused a turmoil indescribable. Particularly was this so at one point where two jetties met at right angles, creating a veritable maelstrom. The seaward end of one of these jetties was protected by what may be described as the outer breakwater. Camera in hand, open and ready, I climbed the steps of the twenty foot parapet and crept along the top, pausing every

few feet to make sure that no seas had, or were likely to come across the particular spot. Having gone as far as seemed reasonably safe, I got one exposure and knew it would be good—got ready for another—exuberantly stood up—back to gale—snap!—and a sea that left me drenched and terror-stricken, flat on the wall and holding desperately on to a ring bolt with one hand and with the other raising the camera as high in the air as possible, as two more seas swept over me. I glimpsed that cement paving on the landward side, twenty feet below—it looked like a hundred.

Had it not been for the poor camera I would have been able to laugh at my plight as heartily as did the knot of fishermen bunched in a little shed up the dock a ways. I sloshed by them at a dog-trot, intent only on getting back to the ship to dry and oil the camera—but alas, it registered no more! Still there was that one splendid picture.

The Provost—Scotch for Mayor—came to call, and gave us the freedom of the port—unofficially. But the town chemist, one John Banks, certainly showed us true and practical hospitality. He took the captain and me trout fishing. The results of this expedition outran my anticipations, as, in a

cold drizzle and a light like "gray dawn" at 9.30 P.M., we were set down beside a little pond twelve miles from Wick and not two hundred yards from the sea. Thought I, "If I get one fish out of that hole I'm lucky." But I did—just. There was a howling gale, which fortunately was at our backs, and bursts of rain like hail, so I for one was glad enough when after a couple of hours—still the same weird light—we decided to call it a "day." Fortunately the others proved themselves better fishermen than I, and after a "couple" on board on our return, Banks tried to climb ashore through the rigging (the tide being very low just then), and refused absolutely to take any of the mess with him. We had trout for breakfast or lunch for several days.

Perhaps Mr. Banks' attempts to ascend the rigging were due to some chronological confusion in a temporary disorder of cerebral ratiocinations, as on our next sight of him at ten o'clock the following morning, he was at the top of a ladder industriously polishing the front windows of his shop.

The gale never abated for three days, though the seas did not seem to augment greatly during that

time. Whether "recking not of their lives, or because of their wives" the fishermen put to sea on the afternoon of the third day. We went down to the end of the jetty to watch them go out. Between the jetty and the breakwater which protected it, the opening was perhaps thirty feet wide—we had little to spare coming in. The trawlers—about the size of an average harbor tug—came up one by one at slow speed. As they entered the passage the engine room bell tinkled for full speed. As they passed the jetty, but before reaching the end of the breakwater, the wheel would be spun hard over and the stern swung around, so that as they came out into the open ocean they would be headed straight into the on-coming seas. It was pretty seamanship, since putting the helm down a few seconds too soon would have meant a bad scrape, if not a crash on the breakwater, and a few seconds too late, broaching to in the seas and wrecking on a ruined masonry wall not over a hundred yards to leeward.

One week exactly it took to make the engine repairs and we got under way very early on the morning of Tuesday, June 15th, glad enough to leave a place where every inch of ground and breath of

"A Vôtre Santé" -- Colonel Cossart on Deck -- Target Practice - Trying to Hook a Bonita -- Mrs. Metcalf Paints the Shelter House

air fairly reeked of fish, and even our hands carried the smell, however often washed.

With light airs and weather usually thick, we slid through the Pentland Firth and around Scotland to meet a gale and heavy fog off Donegal Bay. On the port tack under double-reefed lower sails we laid to sea for twenty-four hours or so, then came about with the purpose of getting a land fall and locating ourselves accurately. That night the fog was very thick. Coming on for the evening watch at eight o'clock I discussed with the Captain the advisability of using the siren or foghorn. It was finally decided that as we were presumably out of the line of traffic, we could safely dispense with both. About 12.30, the weather still very thick, I went below to call the Captain to relieve me. On returning to the deck and feeling rather weary, I turned to port and leaned my elbows on the engine room hatch. A few moments later I casually glanced over my shoulder, and beheld the flaming mouth of hell with a mighty halo of fallen stars! In other words, the port and deck lights of a liner bound out. "Where did *that* come from?" I exclaimed to no one in particular, before I jumped for the wheel and helped the helmsman put her "hard a

starboard." We sheered off and the liner slipped silently by us like a ghost, ignoring entirely our angry blasts on the siren.

What was our surprise and disgust to find ourselves late the next afternoon right back off Donegal Point. We had not gained a mile in thirty-six hours and had been right in the lane of any steamers coming out of the Irish Channel.

That night a stiff westerly breeze blew the fog away and all sail was set. We raised a trawler and as she passed close aboard, the moon came out. Blast after blast in salute the trawler emitted on her horn, and indeed a fine sight the pyramid of new canvas, every stitch drawing, must have presented in the moonlight.

There were many theories in regard to the lineage and previous condition of servitude of our square-sail. Certainly any age and history might be attributed to it. While fairly sound, it was thin as a bed sheet and curiously enough was not even square, or rather rectangular, one lower corner dipping far below the other. However, we carried it for over three days and it gave a very good account of itself, doubtless being responsible for many an additional mile.

The wind held all the way across Biscay almost to Cape St. Vincent, where we dived over the side and afterwards basked in the sun on deck. Then with our engines once more going, we slipped past Gibraltar with a fair wind, on June 29th. But oh those airs of the Mediterranean! The morning of July 8th found us practically out of fresh water, engine again completely out of commission, twenty odd miles off Monte Carlo, yet by the time we dropped anchor outside the harbor in the long shadows of the south headland, darkness was creeping on!

Scarcely were we set and snug, and, on the advice of the pilot, resigned to dinner on board, when from a launch that had come out between the breakwaters, came a hail, "Is that the *Wawaloam*?" Scarcely believable—Bob's voice, and in another two minutes, despite the objections of the Captain (since we had not yet obtained pratique), Ann, Grace and Bob were on the deck and we were all hugging and squealing in a most un-Anglo-Saxon manner. Twenty-three days out from Wick and thirty-four from Grangemouth!

Getting into the harbor of Monaco—Monte

Carlo—is a simple matter, even when, as in our case, towing is necessary. Anchoring and mooring is an entirely different proposition. You are ordered to let go, somewhere in the middle of the basin, and then heave in quaywards stern on, with shore lines, easing out on anchor cables at the same time.

Once you are in they run a gangway right up over your stern rail. Of this, Kay and Miss Williams quickly took advantage, Kay to grab a bus for Nice—which of course she never got. Bob came aboard in an hour or so, and we discussed plans and possibilities, equipment, etc., for quite a while.

We lunched in the *jardin* of the Café de Paris, facing the magnificent north façade of the Casino. My first view of it seemed like something of an event in my young life—so we had a cold bottle.

The late Prince of Monaco's Oceanographic Museum is a most wonderful place. The base of it rises in three great arches from the sea, up the cliffs on the outermost point of the head that guards the bay within, and through the supports run the pipes connecting the Aquarium with the sea water.

The Aquarium is not nearly as large in tank capacity as the one in New York, the only other

one with which I am familiar, but to me it seemed far more interesting in respect of its diversities of strange marine creatures. It was my first introduction to the octopus and squid, alive and plainly visible in their own element. To see one of these breathing, is one of the things most calculated to give a perfectly sane and sober person a very excellent attack of the hebegeebees. And many of the eels were also monstrous, horrible looking creatures.

There was a tank of prawns where a most interesting conflict was under way. A dead snail had fallen from his position against the glass to the bottom of the tank. A good husky shrimp had preëmpted the remains, and perched on top of the shell, defied, with his six-inch feelers and shorter horns, all possible aggressors. He stood them all off one by one for a while, until, as he was engaged with an enemy in front, he suffered a rear attack. Quickly he laid one long feeler right over his back as though to poke his new antagonist in the eye, but suddenly decided that events were too much for him—though he had been holding his own right valiantly up to that time—or else that the game wasn't worth the candle. He made a mag-

nificent leap through the water, to be succeeded by one of his late besiegers, who was immediately set upon by the others in turn. It was quite amusing, particularly as the creatures seemed so utterly soft and pliable as to their offensive weapons and comparatively well fixed as to their defensive armor, as to lead one to think that they could not do each other any damage whatsoever—yet they were most prudent and cautious in attack, retreating immediately a hostile lance was pointed at them. Some of these crustaceans, because of their color, were absolutely transparent, giving a wonderful view of their anatomy and inner workings.

The upper floors of the Museum present a most graphic, tangible picture of everything conceivable connected with the sea. Mounted specimens of hundreds of species of sea birds, copies of mammals and bones of some extinct ones, originals or models of sounding gear, whaling gear and boats from the earliest times to present—a truly marvelous collection. So if it is any consolation to them, the poor donkeys of the Casino may feel that some of their losses have gone to the advancement of knowledge, and the interest and entertainment of their fellow men.

Of course the Museum cannot be seen from the most frequented parts of Monaco and Monte Carlo, and indeed can only be properly viewed externally from a vessel at sea. Still it is amazing that so many people have been to this portion of the Riviera again and again and never even heard of this most fascinating institution.

We walked through the lovely gardens of the Museum which were full of liquid bird notes, and along the west shore of the promontory; the loveliest view perhaps of all the lovely views of that lovely coast. The cliffs rise up almost straight more than a hundred feet, while below you and to your left, the "Mediterranean blue," which is at its best only when seen from above.

A curious blend, the Palace. Facing a pebbly square, wall-shaded on two sides, with its white-uniformed and helmeted sentries and flanked with medieval battlements, it gives a combined impression of Moor, Spaniard and Indian.

They have a curious arrangement about the Customs here. It seems that France didn't care about Monaco collecting her own—at least there was some kind of a misunderstanding. Supposedly Monaco has complete faith in her big neighbor,

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because now France collects and remits without any apparent check on the part of Monaco.

Of course Bob is a very efficient "feller"—though not painfully so, thank goodness! So when on Friday afternoon two ill-smelling locals came aboard to give him a paper summoning him to the *douane* to open for examination a package which had come for him from Nice (and which he immediately placed as some formaldehyde which he had purchased there), Bob seemed a bit perturbed. He didn't say much, but it was evident that deep thoughts were revolving. Possibly they ran somewhat like this:—"I buy some pharmacopœial fluid in France, two miles (or rather eight) from the Monaco frontier, and order it shipped to Monte Carlo, Monaco. Arriving at the frontier it is held pending examination, at a Customs House flying the French flag and administered by French officials. Why not cancel all Monaco-French Customs and all French-Monaco Customs, and call it the week's wash?"

There were strict injunctions that if we wanted to get the goods through we must be at the Customs at two o'clock, *sans faute*, and as it was Saturday, we didn't want to take any chances on our proposed

departure of daylight Monday, so we were on the dot or a little before, although the *douane* was quite a way over on the Monaco side and it was very hot at that hour of the day.

When we arrived all was locked, so we crouched in the shade of the lobby and wiped our brows. Soon a fussy little gink in mufti came along and went around to some side entrance, opened the door to the *douane* offices from the inside, let us in, acknowledged our claim to the box—the only piece of merchandise in the office—listened to the explanation of its contents, and was, so we thought, on the point of telling us to take it and go, when a slight commotion in an adjoining room caught his attention, and he hopped in there without further regard to us. Through the open door we could see on the floor about six bottles of various wines and spirits, and for fifteen minutes or more, five individuals stood about those half dozen bottles and jabbered collectively—and uninterruptedly. It is doubtful if they ever reached any conclusion in the matter—it was impossible to understand more than a word here or there, partly because you could not tell who was saying what—that is, it was impossible to follow the thread of anyone's conversa-

tion, but suddenly with one accord they all fell silent, the little fellow hopped back into the outer room and seemed rather annoyed to find us still there. He quickly dismissed us and our case, and crossing our two sticks under the lashings of the 12 bottle box, we started back for the ship.

Wasn't it lucky that just as we were feeling most awfully hot, and indeed in danger of wilting, we ran into one of the pilot's boatmen, who immediately tossed the case on to one shoulder as though it had been a soft, six months' old babe? And how even more fortunate, that we were just alongside a most delightful little yellow awninged restaurant, which proved to have the fattest, most delicious *langoustes*, and splendid beer served in carafes with a wonderful coating of frost on the outside.

About a year and a half before, we had met in a certain southern port of the United States, an official of a South American government and his wife, an American—that is to say—U.S.A. girl. Charming young people they were, a witty and handsome couple—the more the pity it seemed that, at his age, "Q.T.," as we will call him here,b ecause it sounds something like an elision of his name, should have

been so bald. They came on board for dinner one night when our little schooner was lying at a dark, lonely dock at some distance from the center of shipping. After dinner we played bridge, and as we were seven, this required considerable cutting in. When he wasn't playing bridge, which was naturally a good deal of the time, the Don divided his time impartially between singing to his own accompaniment on the piano—which he did splendidly if somewhat stentoriously for a small cabin in which others were trying to hear the bids—and assiduous attention to the whisky bottle. As the port was in a very dry State, and the gentleman's alcoholic potations had consisted for a long time past exclusively of "corn," it was only natural that —such being offered—he should have these occasional, not to say frequent, references to the very passable Scotch at hand.

By about three he was really doing very well—both as regarded his rendition of a clever parody on a then popular air and the contents of the bottle, after every assault on which he would invariably exclaim with intense gusto—"Ah, mose ree-freshing." About this time, after numerous attempts, his wife got him to acknowledge "bed." The tide

was out, but "Q.T." did splendidly getting up on the dock and heaving up the wife—while I pushed. Then the damn fool walked right across the dock and just as I yelled "look out" there was a splash and—silence.

Black, black as pitch, and only a half-dim electric torch to lighten. Dropping on my knees and peering down, I called—"'Q.T.,' are you there?" Back from the black water ten feet below came the calm, imperturbable answer—"Oh, ye-es, mose ree-freshing." And you couldn't get the bird to take any other attitude toward the situation, for the quarter of an hour he was in the water. His wife entreated him to take off his coat, which he positively refused to do "because his cigarettes were in it." We knew he was a powerful swimmer, but we also knew that the water was desperately cold and that as his clothes got water-soaked, he must be carrying SOME extra pounds. During this exchange of words, nothing had been visible but the shining crown of his bald pate. Calling to him to hold on to one of the piles, I began to grope around for a rope, and found a piece just too short. While "Q.T." was vainly stretching for this, the other two men of the party having heard my shout put

in an appearance, and simply because of my earlier efforts to be polite to Mrs. "Q.T." and see that she had a good time, I was subsequently accused of dangling the rope just out of the reach of the husband, and when he refused to drown, of trying to throw a big mooring buoy on his head. As a matter of fact the buoy would have made a splendid life preserver, but it was too heavy to move.

Leaving the others to breathe exhortations, I ran back to the ship, got down the after falls of the port launch and somehow managed to get a bowline in it. This, with no lack of adjurations from us, to "be careful," "Q.T." got under his arms and we dragged him along the dock to where a little painting float lay. He made one big heave and got up on it—and it was a remarkable feat because his clothes weighed about a ton by then. And of course he was no sooner up on the end of the float than, as he started to remove his coat, the other end of the float shot up in the air and he fell backward into the water again. Well, that made "Gick" pretty sore, so the next time "Q.T." crawled up on the float "Gick" roared at him: "——you, 'Q.T.,' sit down or I'll kill you."

We hove him up on the line, and sad to say we

dislocated his knee doing it, though the good sport said never a word about it that night, indeed as he came up on a level with us his first words were "Mose ree-freshing evening." Most inhospitably we bundled him into his car without even running back for a rug to wrap him in, and his last cheery call as the car swept away was a final "Mose ree-freshing." Sporting I calls it.

That seemed in "the long ago," yet here in Monte Carlo, some four thousand miles from where we had seen them last, was a note from the "Q. T.'s," postmarked two months before, which had gone to New York and come back, saying that they were just over the ridge from Monaco, that this was the climate, and why didn't we come over to the Riviera sometime soon. So we popped in on them. It was sort of a dirty trick, right at the Sunday siesta hour, and when he opened the door, of course "Q.T." did not recognize me, and when I announced myself I am rather uncertain as to whether he knew who I was even then. Probably he falls off docks night after night!

Mrs. "Q.T.," boisterously summoned, presently made her appearance, looking charming, as so few women called from an afternoon nap can, even

if they have thick wavy hair, a sleeveless jersey, and arms just prettily plump.

We chatted an hour and before leaving arranged for all of us to dine together in the evening at the "Pigeons" in Monte Carlo, which we did, and everything was "mose ree-freshing." Afterwards we went on to the Casino, which was little richer for our visit—I think I topped the list of losers with Fcs. 100.

All stores, minor repairs, and our laundry had been arranged for the first thing on arrival, and so true to their promises were all the tradespeople that almost to our surprise we found ourselves actually getting under way by daylight on Monday. And lucky it was, for scarcely had we cleared the jetties and our tow boats cast off, than the north-easterly breeze which had come on at sunrise, rapidly freshened and we were soon doing a nice eight knots. Lucky indeed, since another hour in the basin would have made it impossible for us to tow out that day, perhaps many more.

Twenty-four hours we held the wind—thirty-six miles we made in one watch—one hundred and fifty-six miles in twenty-four hours—and took six days to complete the balance of one hundred and

fifty-nine. Oh, those airs of the Mediterranean!

When we went in to lunch on that Friday, the ship was piling along with a strong quartering sea. Grace had already retired to her room and Ann was on deck but feeling like a wreck; however, she accompanied us as far as the dining saloon, but one look at Lobster Newburg finished her, and she fled regardless. Bob had once spent eleven months on a whaling cruise, so when I noticed how bad was his color as he seated himself at the table, I thought nothing of it, beyond hoping that the sea voyage would do him good, but he too succumbed to the sight or fragrance of the crustacean, and presently was seen to be searching for specimens from the rail beneath the launch, leaving Kay, Miss Williams and me, the real seagoers, to polish off the lobster.

Later in the day, Grace asked me from her bed of misery how long this was going to last. It seemed she was referring to her feelings, whilst I, having nothing in mind but the existing great propitiousness of the weather and thinking she meant the wind, replied "five days, I hope." Relations were momentarily strained, but a few words of explanation quickly put things right.

Though so little productive of added miles, the calm of the succeeding days was of use to us in our collecting. On the third day out, Bob and I went off in the dinghy, heading away on a course four points on the ship's starboard bow. It was easy enough to do this as the sea was perfectly smooth and wind nonexistent. While I rowed, Bob with a big spoon very slowly ladled a greasy and evil-smelling mess of galley slops out of an old can on to the water. We went on so for a mile or more and then reversed our course, putting Bob's back to the sun, by now more than halfway down to the horizon.

All that day we had not seen a bird, nor so much as the feather of one. But a few minutes after turning about, a little dark bird, showing white between its tail feathers, appeared some way off skimming close to the water over the slick which had been laid, darting and wheeling, flying much in the manner of a swallow. Soon others came and gradually getting nearer enabled Bob to shoot four, much to his enthusiasm, since these were the first specimens of *Hydrobates pelagicus* he had ever personally secured.

This is one of the several smaller species of petrel

commonly known as Mother Carey's chickens. The well known myth that if these birds get their wings wet they will die, may very likely be the result of their "dancing on the water." It is a most graceful performance and certainly gives the effect of endeavor on their part to avoid letting any part of themselves touch the water except their feet.

During the course of the next few days several more specimens of this species were secured, and one example of a somewhat larger species *Oceanodroma leucorhoa*.*

On the last day before reaching port, we again put out in the usual flat sea and in a dead calm, though by the time the slick was spread we were jumping about in a choppy sea, and with a smart breeze which had come up behind, the ship was almost hull down to leeward in a short time.

Soon a bird nearly as big as a large gull tackled the grease on the water—and was dropped. Presently another came by, and I was rather pleased at hitting it as the angle was a difficult one and by now the dinghy was trying to stand on both ends at once. These birds were both great Mediterranean shearwaters—*Puffinus kuhli*.

*It was afterwards ascertained that this was the first record of this bird in these waters, in the breeding season.

The *Wawaloam* had now come about, and was headed up toward us flying "come aboard."

It was remarkable how much difference the few ounces of grease on the water made. So long as we were able to keep in it we didn't even get wet. But when the ship came along things were quite active for a few minutes. To get alongside, shipping the oars at just the right second, grab the sea painter hove to us, meanwhile fending off; pass up the guns, slide along aft, hook the boat on to the falls and keep her from swinging and banging under the counter as on deck all hands hove away, required some measure of activity and seamanship.

CHAPTER THREE

Looking Around on Majorca

BEFORE sailing from Monte Carlo it had been decided to let "Nature take its course" and that our destination was to be determined to a large extent by wind and weather. So we had headed about south, and as no manifestation of the elements made necessary any considerable alteration of this course, we arrived in due time—at daylight of the seventh day to be exact—between the two rocky horns that rise on either side of the big crescent of Alcudia Bay, Majorca, the largest of the Balearic Isles.

Of wind there was little or none, so even with the assistance of our launch our progress up the bay was painfully slow. Also the weather was painfully hot; so hot that it was impossible to stand on an unsheltered part of the deck for many minutes. The helmsman stood on a cocoa mat and about every twenty minutes a bucket of water was sloshed on his feet. The girls lay about under the

main deck awning gasping, or hung their feet in the water from the foot of the gangway. A unanimous resolve was made to leap overboard the moment the anchor was down. Just then a purple jelly fish about the size of a parachute came swinging by a couple of feet below the surface, followed at fairly regular intervals by several hundred more. We never swam in Alcudia Bay!

Some months ago I had asked the Captain about his linguistic abilities, and he had replied rather vaguely that he could "get along" in most any language. It would be difficult to say just what his ideas of "getting along" comprised, but there remained no doubt after the pilot had been on board five minutes at Monte Carlo that the Captain's French vocabulary did not include over six words. However, there was in mind a hazy recollection that his Spanish had been described as quite extensive. The pilot at Alcudia has a very curious dental arrangement. On the right front of his upper jaw he has four inch-long tusks. On the left side of his lower jaw, ditto. When he talks in his squeaky voice, the result is curiously like wind whistling through the rigging. The Captain was quite floored. With a normal Spanish person he might

have come back with a selection from his vocabulary—afterwards discovered to consist of one number less than his French—but this swirling and hissing was too much for him. Even Bob, whose Spanish is really quite extensive, had his difficulty, though in his case due more to the Balearic patois than to the pilot's manner of articulation.

The pilot promised to attend to pratique and send the doctor on board at once, but as we heard no more from him that night, we broke out fairly early the next morning,—about six,—and Bob and I rowed ashore in the dinghy, a good mile pull. A short conversation was had with the saber-toothed one, who came down to the end of the combined quay and breakwater. It resulted in our ascertaining that the medico was the French Consul, that he was a mild and phlegmatic gentleman, and that nobody thereabouts knew what a passport was. This confirmed our already half-formed determination to ignore formalities and descend upon the island *en masse*. So we returned to the ship, and having breakfasted, donned raiment suitable so far as possible both for the considerable heat we were sure to find and for our call upon the authorities.

Bob had a letter to one Captain Munn, an Englishman and naturalist who had been a resident of the island for many years, and had two homes there, one in the port, the other, a lovely flower-girdled *finca* on higher ground to the north. But alas, Captain Munn himself was on a protracted visit "home."

The ubiquitous representative of the "four out of every five" again greeted us on the pier head, and guided us out along the dusty road toward Alcudia city. Quite a caravan we were, nine in all including our guide and a rear guard in the person of a youth of about four, who was clad only in a short shirt, most of the bottom end of which he kept stuffed in his mouth for the entire half hour that he kept us company, in the laudably courteous effort, I am certain, of restraining his mirth at our singular appearance.

Cultivation on both sides—olive trees, grapes, melons and garden truck—people singing at their work in the fields—or rather intoning—as if reciting parts of the Mass. In reality these songs, called *malaguenas* are of Moorish origin and are heard everywhere over the Balearics.

Presently we came upon a water wheel, one of

the most picturesque sights of Majorca. Fortunately the ground water is very near the surface, and shallow wells are dug for irrigation, surrounded by circular flat-topped mounds of earth, probably averaging twenty-five feet in diameter and eight in height. With its axis in the mouth of the well hangs a vertical or horizontal wheel, to which are attached buckets of a reddish earthenware, a very beautiful shade when wet. At the end of a long pole, a blindfolded mule, donkey, horse, ox, bull, or cow walks round and round on a tow-path on top of the mound, while wooden gears on the other end of the pole and on the water wheel cause the latter to revolve.

Naturally, as a protection from the sun for the animal and the person who must be present to keep the beast going, the farmers have planted trees on the sunny sides. To leave the hot and dusty road for one of these shady little oases—to lie at length and watch the slow plodding of the animal and the moist, cool-looking jugs coming up endlessly, turning their crystal contents into the trough that leads out into the fields, to hearken to the soft splash. . . splash. . . and the gentle creaking of the wood—these make a rarely sweet and soothing combination.

Twelve or fifteen minutes more of plodding and we came to a power house on our left, and facing us the Moorish walls and eastern gate of Alcudia. In ancient, dignified defiance, those turrets seemed to say to the bit of commercial modernity at their feet "Stay thou there, within these walls thou must not pass." Nevertheless Alcudia is electrically lighted throughout.

We passed up a very narrow street into the main plaza—just a square piece of dirt road, swept clean of dust, and down another still narrower street, to stop at a house where from the balcony flew the tricolor of France, the home and office of the combined French Consul and *médico del puerto*. This multi-functioned officer was absent, busy, so we gathered, in paying professional calls. We wandered on, up one tiny street and down another, till we came to what proved to be the *Casa del Capitán del Puerto*. Invited, we all passed into the big "foyer," had a glimpse of a flowery and spacious patio in the rear, and were ushered into a near-by dark and much geegawed reception room.

It had been expected that the Consul-medico, who was present (making apparently an entirely social and unprofessional visit), and I were immedi-

ately to arrange all diplomatic matters and establish a complete *entente cordiale*, which of course would have worked out splendidly had it not been for the trivial, but unfortunately insurmountable obstacle of the Consul-medico's total ignorance of French! But between Saber-tooth's hisses, Bob's goodly supply of Spanish, and the Captain's waving of hands and lifting of shoulders (the best part of his Spanish vocabulary), we finally made out that we were free to land—having already done so—and free to fish for or shoot anything—except the inhabitants.

Insisting on the Captain taking the garrulous tusky one away with him, we set out to find and visit the church which we had seen in the distance from the harbor.

The main doors were flung wide, but just inside hung great curtains, keeping out to a considerable degree the hot wind, and creating an impression, at least, of coolness inside.

Within we stood for several moments in astonishment at the beauty and taste of this church in a tiny out-of-the-way fishing and farming town of little more than 2500 people. Here were people living in greatest simplicity, with almost none of

the luxuries or indeed modern conveniences. What extraordinary sacrifices they must have made to build this lovely temple, and indeed must continue to make for its maintenance.

The further we advanced, the more were we struck with the many fine things. Hung in the middle was a splendid chandelier of bright steel or iron. It was simple and dignified, yet very original, and suspended by what was either a "seagoing" hemp rope or a very remarkable imitation of one in metal.

Over the main altar was a splendid old canvas, a "Descent from the Cross," and there were several smaller but equally charming paintings. The glass, while not striking, spread about a lovely diffused light. The pews were simply but tastefully carved and there were several particularly delightful pine benches along the side.

On each side of one of the small altars we discovered another "seagoing" touch, in two primitive half-models of ships, apparently quite ancient.

The Lady chapel on the north side was perhaps the nicest part of all, for the same good taste was shown, while the light was unusually pleasant. This was evidently the old part; the masonry was very massive and may easily have been contempo-

rary with the ancient walls, which at this point, just back of the church, appear more Romanesque than Moorish.

We wandered through the quaint, narrow, clean, streets till we found ourselves back in the square again and made inquiries for a bank. We were led through, and off to the side of a big storeroom, and were ushered into an apartment with quaintly carved chairs and wooden lattice over the counter. A wizened little old man bade us be seated at a table opposite him and we somewhat diffidently suggested to him the possibility of transferring some of our French francs into pesetas. It would be impossible to describe adequately the contortion of his lineaments at this proposition, they sort of contracted into a little bunch, not unlike those semisoft rubber balls, bearing features, to be squeezed into various expressions. But he had no hesitancy in accepting our American Express cheques, though Bob said he was sure the man had never seen one before.

Our party had drifted apart, but now we reunited at the alleged hotel, in a large room with a small bar topped by many bottles of the most fantastic shapes. We ordered "cerveza"; the heat had been

intense, and we hoped that the beer would be chilled, but even in its half-cool condition it was most welcome.

The next morning was cloudless and held promise of great heat. At an early hour we all embarked in two small cars of excellent make but of pre-War, almost prehistoric origin.

Alcudia is at the northern end of Majorca, Palma at the southern, some thirty-five miles away. Since Captain Munn had failed us, we deemed the United States Consul to be the best person to work on our behalf to get a real permit to shoot, and Palma and an interview with him, were the day's objectives.

There is a railroad, which however only comes as far north as Inca, about fifteen miles from Alcudia. We asked the natives about it. Their replies were most ingenuous. They said there was a train most every day, that it used to run twenty miles an hour (not including the many stops), but that they had a wreck and some people were hurt, so they didn't go so fast any more. Hence the choice of motors, even though of such a vintage.

At first the roads were very good; we got some dust only when an occasional cart went by, and we

looked forward to a splendid day with the cameras. But the smoothness of the first miles was only to lead us on; later the uneven surface proved that all the life had long since left the springs of our ancient chariots.

Several times during the early part of the trip we stopped to photograph the water wheels and the very interesting threshing floors. There were also many picturesque wagons, mostly two-wheeled carts with covered top, that reminded one of the old prairie schooner. It was at this time that we were informed that the reason for blindfolding the animals whose ceaseless rounds make the fields grow, was because were the animals able to see they would become seasick.

Presently we came to a very sea of windmills, indicating perhaps that mechanical devices are gradually taking the place of the more picturesque animal worked wheels.

By the time we reached a place called Inca we had made about a dozen enforced halts to enable the chauffeurs to effect such minor repairs as would enable our engines to carry on their coughing and sputtering progress. Here we made quite a lengthy pause, and took advantage of the opportunity to

look over the central portion of the town. The walls of the streets and houses, seemed ancient and solid and were even more picturesque than those of Alcudia.

As we were admiring the great mass of the Moorish looking church, an interesting funeral procession issued from a side entrance. There were not many men in it, but practically all the female population of Inca must have been in attendance, all in solid black with long mantillas reaching nearly to the ground.

From Inca on, the road, which so far had been very fair, grew steadily worse, perhaps being the occasion for the increased number of tinkerings with the engines, and certainly increasing the bumping and lurching of the cars and of our own persons.

After removing the dust with which we were plentifully coated, with the clothes brush which someone had happily put in a pocket before leaving, we commenced inquiries as to the address of the United States Consul. One of the chauffeurs constituted our guide, and the anticipations of arriving at the door of the United States' representative with him in tow were not entirely encouraging, he being

A Splendid Doorway, Alcudia -- Feast Day of St. James, Alcudia -- East Gate, Alcudia -- Moorish Round Tower, Alcudia Bay

hatless, coatless and collarless, and with his trousers supported by a pair of galluses which had apparently been designed as traces for a Percheron or Clydesdale.

We wandered on for about a quarter of an hour through charming narrow streets, paved and dustless, where the bases of the houses were only a few feet apart and their balconies, almost universally adorned with little bird cages holding finches or warblers, nearly touched above.

To almost every individual that we met the chauffeur put an inquiry, so that it was not long before we decided that our guide was totally ignorant of what we were seeking. Of course, in our fatuity it had never occurred to either of us that to these people United States of North America meant just nothing at all, but this condition was brought home to us at this time by the cheerful reply from one person that "surely he knew where the Consulate of Uruguay was."

Eventually we found ourselves, probably more by accident than design, in the main square and incidentally before the Community Theater, a handsome and imposing building though of no recognizable type of architecture. Next to it was

located a police station and quite an intelligent young *carabinero* promptly pulled a little book from his pocket and turned to the list of Consuls. Every South American country was represented, but no United States Consul. It was at this moment that Bob's spirit broke. I had evinced great skepticism as to the probabilities of a Consul on this island, but Bob had never wavered in his quiet confidence that of course the majesty of our great country must be represented in the Balearics.

The next best bet seemed to be to apply to the British Consul. The chauffeur and the policeman had a few words on the location of the British Consulate, our guide assured us that he understood, and suddenly rushed after a tramcar which we all boarded. The car went down to the harbor front and then wound out and up and down along the coast to the west.

Having left the girls unescorted, save by the other chauffeur, and with no possible means of communication even with him, we began, as we got farther and farther from Palma to have many misgivings. Eventually we descended, and from the first person we asked were advised that the British Consul was in Barcelona for three

months' leave. Our spirits dropped another foot.

Our dispositions somewhat improved by finding that those of our wives had not been impaired, and by a very good lunch washed down with some excellent beer at a place called the Alhambra, we again set forth, this time seeking for the whereabouts of the Marine Zoölogical Laboratory and Aquarium. It was small wonder that none of the seventy thousand inhabitants, to each of whom we individually applied, knew the location of the institution, since when it was found after a search very similar to that for the Consul, we discovered it to be empty and boarded up pending transfer to larger quarters now in course of construction.

Moistly, totally depressed we surrendered, only asking to be returned whence we had come.

But the commencement of our return journey to Alcudia was no more propitious than any of the other events of the day. With stupidity almost unbelievable, the first man drove right past the perfectly plain way we had come in to town, got into a street which had a notice to the effect that it was under repair and got arrested for having entered it. He offered a bribe to the policeman, who very haughtily refused *but* indicated that a

substantial deposit might be lodged with an old crone who ran a shop hard by. A half mile farther on, both cars came to a standstill outside a garage, and we learned for about the fourth time that day that we had to take oil, gas, water, and probably other needful supplies. It was during this stop that a large hole was discovered in the radiator tank of the Renault, from which a stream of water was spouting in a three-foot arc. This seemed to be the last straw, and the girls pleaded with Bob to make a deal for a fresh car if a good one could be had at the garage, but his spirit had been broken several hours before, and his almost total inability to make people understand him or to get the gist of their conversation, had not had a favorable reaction on his condition. Under any circumstances Bob would have no doubt recovered his usual complete serenity in due time, but most probably this happy eventuality was greatly expedited by the explanation which he received the following day, to the effect that Majorcan is a dialect of a dialect of Catalan, as readily understood by Italians as the continental Spaniards. This helped, too, in explaining why he had not got on better with the pilot.

By good luck there was a man who spoke French and through his mediation, we secured the services of a large and new looking American car, into which we all piled and started off, leaving our chauffeurs looking very down in the mouth at our departure and more particularly the severe cut we had made in the remuneration originally agreed upon.

Returning in this comparatively luxurious manner, with the sun dropping lower at our backs, we had better opportunity for observing many things which had escaped us in the morning. At first we passed mostly grape orchards, shortly succeeded by groves of fig trees, some such as grow in Palestine and some smaller ones, really a species of prickly pear cactus, imported from this hemisphere; orchards of almonds and of olives with their knotted, stumpy trunks and great writhing arms, resembling nothing so much as the "Wood of Self Murderers" in the Inferno. Infinitely ancient they seem and it is not hard to believe that they really are the thousand years popularly ascribed them.

During the latter part of the trip dusk was setting in, but the seemingly untiring beasts were still going their rounds at the water wheels, as their

owners toiled near by, and in all the towns and villages every member of this amazingly industrious community was busily working in his or her doorway making pottery, shoes, or other wares.

By the time we reached the ship the sun had just dipped below the farthest ridge of the western mountains, and through a huge hole just below the crest, blazed like a great red eye, and cast a prism-shaped blanket of light across a section of the otherwise darkening plain.

CHAPTER FOUR

Collecting and Exploring about Alcudia Bay

EARLY on the morning after our fruitless trip to Palma, Bob and I went off in the motor boat with two sailors, north along the west horn. Soon we were in a grotto in the cliff, and around a slight bend found ourselves in delicious, damp coolness and almost complete darkness. At this point the roof came down to a headroom just tantalizingly less than we needed to pass under, and we reluctantly had to retreat to the sea.

Just outside of this grotto we prepared to set our first dynamiting charge. Bob had seen fish dynamited many times, but had never handled the stuff himself. My closest contact with dynamite consisted in having watched with deep trepidation one Clarence Ryerson, many years ago in Wyoming, put a package containing, he assured me, three sticks of dynamite in his shirt bosom to keep it "dry," and proceed to mount a pony that always bucked

in the mornings. For several days I kept a good two hundred yards behind Clarence for the first hour on the trail.

Our exploding proposition was this:—First we had the gelatin (dynamite water-proofed). Each stick was about six inches long and about an inch and a half in diameter, wrapped in oil paper and resembling nothing so much as a cube of honey, in color and texture. Into this we had to fix a detonating cap of fulminate of mercury. Neither of us cared much for the idea of pushing a hole into the gelatin, so Bob pressed the cap gently into the side and wrapped the whole pack into the paper, binding the package up with string. Then the end of the cap leaders were bent on to two ten-fathom water-taped wires, and the charge lowered slowly over the side. When the charge was on the bottom we pulled gently away (engine stopped, men at oars) until the line was taut. Then the wires were attached to a small hand dynamo, a quick turn, a sharp "boom" and a few yards away the water rose like an effervescent spring, soon followed by a number of small fish, feebly waggling. These we scooped in with the dip net, Bob finding later that we had se-

cured representatives of only five different species.

Of one kind—a small porgy—every single individual had attached to one side, rather back of its middle, a parasitic crustacean. The fish were about five inches long and the parasite (since identified as an isopod, *Anilocra mediterranea*), nearly an inch. While isopods are parasitic on fish in all waters, the curious biological variant in this case lay in the possibly protective coloration adjustment, since the side of the parasite which happened to be uppermost matched the dark portion of the host, whereas the lower half was of the same silvery hue as the belly of the fish. The pests were thus lopsidedly colored.

We started up the engine again and sped along the shore—great cliffs rising sheer to several hundred feet from the water, full of little grottoes at the water level where the seas surged in and shot out again through blowholes in showers of spray, with mournful sound not unlike a whistling buoy. Cliffs, where one could lean back in the boat and, looking for the sky, see only some gigantic boulder about to loose its hold and crush our shell and us on the rock bottom as many fathoms below. Or perhaps a valiant little Syrian pine tree with a

precarious looking root-hold on bare rocks, leaned far out over the water.

Suddenly in the very face of the cliff appeared hewn steps leading up to what at that distance looked like a six inch diameter hole. For the moment we passed on, determined to seek the answer to this on our return.

We rounded a head more majestic than any yet passed, and way up in the cove glimpsed a sandy beach and a line of birds on the edge, some black, some white, four or six black to the right, then a few white, then two or three black—cormorants and gulls. The gulls arose and lazily flopped around us and as we got nearer, the cormorants just sort of jumped on to the water. But when Bob came to shoot them—quickness! There might be a flock of eight or ten, because they seemed to congregate from every side, but before the shot ever reached them and sprinkled all around where they had been, they had taken a short diving-board jump and plunged absolutely simultaneously below. At least so it seemed, but there must have been a late scholar sometimes, for two were secured. They were alike in size and "general specifications" so far as I could determine, except that one was a

sort of dullish green all over though with some iridescence, and the other had a dirty-white breast. This may prove to be due to the difference in sex, which difference was established in the laboratory, or may be a matter of age.

We saw many pigeons and Bob shot a few times, but they were very wild and flew very fast and erratically—almost like the swifts, of which we saw but few on this day but many on the next.

After a few miles more, we turned about intent on solving the mystery of the steps and the hole in the cliff. By the time we had reached the spot the wind had come up quite a lot and a bit of a swell was running with considerable surge on the cliff. We made it prettily, however, not touching even an inch of the launch against the rocks, and telling the men to lie off, followed the course of the narrow steps, sometimes partly natural, sometimes obviously hand hewn, till we came to the little hole in the wall. On my somewhat breathless arrival Bob was about halfway down a six foot stairway cut in the limestone rock.

"Have you any matches?" he called.

"No."

So I toiled back to the landing place and had

the man in the launch toss me his supply. When I got back, I found that Bob had found an old hand-wrought iron gate, so weather beaten that protected from the elements as it was by the cliff, it had probably been there for generations.

Our matches of course did not carry us far, but far enough to realize that this strange cavern might be of enormous extent, and we left with the delightful feeling of something unknown to which we determined to come back. Which we did; we came back and took Grace, Kay and Miss Williams and they all made a fine grade in getting ashore. The flares we had with us were either in our shirts or were tossed up to us from the launch. A calcium light in a bucket, purloined from a life ring, we drew up with a long boat hook. In the little chamber, which was as far as Bob and I had been able to penetrate the day before, we struck a flare and went through a narrow passage, then up some steps and again down some. Round a corner, a few steps ending in a steep and slippery "side hill" up which we scrambled, around a curve, and—total darkness as the flare died to a glowing ember and fell from my hand. Bob with our one electric torch had gone back for more flares and by the

time we had been in the pitch blackness for ten seconds, not daring to stir hand or foot lest we be plunged down some *oubliette* of nature, it seemed as though we had been there an hour, and we began to wonder if the torch had burned out and Bob was even now groping on hands and knees toward the daylight.

Of course he was back in what was really a couple of minutes, with the rest of our flares—five in all. We lit one to conserve the torch and pushed on. After a turn or two and a few steps, we suddenly found ourselves overlooking a vast chamber, the extent of which we could only surmise, our flare serving merely to throw into flickering relief stalactites and stalagmites and solid columns within a few feet of us, carved and fretted as by the hand of a Cellini, and overhead a dome of fairy lacework.

Advancing down a slight decline, we cautiously crossed the cavern, strewn with giant boulders, loose rock and icy-smooth spaces. As nearly as we could determine the chamber was about sixty yards in length by, say, forty wide. Bob had set up his camera immediately on entering and had opened the lens, hoping that if we could keep the

light going for half an hour we might secure a picture. But taking stock, we found we only had left for light two flares and the electric torch. It was decided I should go back and get the can of calcium. Rather reluctantly it seemed, Bob yielded the torch, and fortunately, for scarcely was the turn made and the descent begun when the flare died and I had left only the torch. Ahead loomed up the "side hill" as the torch came into play and I started to ease myself down it, fortunately taking hold of the butt end of a broken stalagmite as I did so, for just then as the feeble arc of light circled about, not three feet in front of me yawned a black abyss.

Crawling back, a bit shaken, I found the steps where I should have turned to the left. Well, lost at the first turn didn't seem too good, so I called to the others and we all filed back, without further going astray, to the daylight and fresh air. The latter we needed sorely as for some time it seemed as though we had been breathing the fumes of the flares almost exclusively.

After a short rest, Bob and I started back with the calcium and a bucket of water. As it turned out we need not have lugged the bucket, as on this

visit we found a little pool, *cemented* on three sides, full of pure clear water. After no little difficulty we got the calcium going, Bob having again set up his camera. Owing to our previous flares the chamber was quite smoky and the calcium didn't penetrate very far through it. Trying to get more water into the can by slopping it in the bucket wherein it was riding, I succeeded all right and put out the light entirely! Leaning over it in the blackness, wondering if there was any possible chance of getting it going again, all of a sudden—*pop* it shot up in my face, brighter than ever.

In his notes, Bob has mentioned the phenomenon of a sparkling which I chanced to note at the base of one of the columns, a beauty, formed by the union of a stalactite and stalagmite. A little flash like a minute explosion would be followed by a little circle of smoke. At first I conceived this to be drops falling from the ceiling and reflected from the ice-like limestone from the glare of our flare, but on putting first my hands, then arms, and finally as much of me as I could over the space where this crackling and sparkling was going on, I satisfied myself that it was nothing dropping from above. Nor do I think Bob was correct in his

guess that the cause was the ashes from our flares. We had dropped ashes here and there all over, rather more than less away from this particular spot, and no other locality developed any such symptoms.

While the calcium was burning I started an investigation of the left-hand side of the cavern. Scrambling cautiously over some boulders, I suddenly found myself at the head of and above what appeared to be a sort of cloister of amazing size, though as to its length of course there was no way of knowing, since the light barely pierced the mouth. It was too dark to see whether there was a safe way down into it—there were certainly no steps and we dared not expend further our electric torch or light our single remaining flare.

Though not so gaseous as the flares, the calcium wasn't thinning the air, so as we were beginning to cough and our ears to ring, we tarried not for the thing to burn itself out, but lighted our last flare and dumped the bucket—going while the going was good.

We had heard the day before that the cavern had been a one-time rendezvous of smugglers. Well of course that would have been the inevitable tradi-

Fishing Boats, Alcudia

tion, and we discounted it 99% as far as the rock hewn steps, etc., went—my private theory being that a syndicate of misled locals had tried to make a tourist attraction of it. But then that little water pool and away goes such a possibility; no one surely is going to be so foolish as to drag cement way up there and way in there to hold about two gallons of water, as a bait for sight-seers. Then there was the sticker of that hand-wrought iron gate, the difficulty of access from the sea, possible only under the most favorable conditions, and the apparently even greater difficulties from the land side. Besides there are probably about eight tourists to Alcudia in a year on the average. No, it would seem that this must be one sure enough smugglers' cave.

After leaving the cave we went on down the coast again, and presently found a large slab of rock that by its evident "fit" to a recess in the cliff had fallen out not so long ago; probably not over two or three centuries, else erosion would have surely made the fit unrecognizable. In this high but shallow cavern we wasted considerable ammunition on a number of swifts. They flew too high and too dartingly.

In deep water just outside the recess and near the rock a charge was lowered and fired, yielding us the same five species as on the previous day and in addition, a sea bass, and a wrasse.

With so many in the boat, it had been deemed advisable not to bring along too much dynamite. Not because thirty sticks would have sprayed us around the ocean any better than the three which we did have, but we could keep better track of three—such as putting them in our shirts! Then across the little bay we tried again, and either because the charge caught in the rocks—or more probably because I had not secured the dynamite properly—no explosion! Ensued (before of course we knew that the charge was no more), a slight argument as to the advisability of hauling in, I referring to the "don't's" which had come with the dynamite, and which by some chance had found its way into my camera case.

We made our last attempt so close to the cliff sides, that I found myself wondering whether there might be a finger hold here and there a toe hold, and for how long, if a surge should broach us to and pile the launch up against the cliff. One new, one only this time, but the most wall-eyed thing

imaginable—the reason for its name—stargazer, (*Uranoscopus*).

Despite the assurances that we had received from the *Capitan del Puerto*, we were to be sadly disillusioned.

One afternoon we went ashore just south of where we were lying, about two miles. Bob had his twenty bore with the double set of inner barrels, I took along the little game getter. We had the launch tow us in the dinghy, and when close to the bar that seemed to run along all this stretch of beach, cast off and took the oars, going in stern first. Once over the bar we found deep water again right into the beach. The dinghy was too heavy for us to get out of the water, so we moored it to the oars as best we could, climbed a steep bank and plunged into a fairly thick juniper-covered plain.

Within a very few minutes Bob secured a little bird which he announced to be a gray flycatcher peculiar to the Balearics, and probably not represented in any United States museum.

We had anticipated making our way through up into the hills for a considerable distance, where we knew was to be found a rare species of crossbill.

Naturally our surprise and disappointment was great when we came upon a half-mile wide lagoon only a few hundred yards on, reaching as far as we could see in both directions.

Keeping on along near the edge of the wood, Bob's great eyesight was wonderfully demonstrated. It was easy to hear and locate the direction of the bird notes, faint though they were, but then he would raise his gun, aim carefully and fire, and a little bird would plump down, where I had seen no sign of motion or feather. He secured a number of these little flycatchers, as well as two or three other species and observed, but did not secure, several goldfinches, two or three blackbirds (*Turdus*), and a species of barn swallow.

After a while we sort of naturally got separated, Bob keeping more up toward the road when I last saw him, and I toward the shore. Before long I managed to bag two little birds, and there and then, as the second one died in my hand, resolved "No more song birds"—not even for science—just felt I couldn't.

A figure appeared in and out amongst the trees. Assuming that it was Bob, I hallooed—then too late saw my error; the figure was in blue cotton overalls.

It hurried toward me motioning, and was joined by another figure, and I was soon confronted by two pleasant-faced but apparently quite determined young Majorcans, and immediately subjected to cross-examination of extreme volubility, first from one and then the other, of which I understood absolutely nothing, beyond the obviousness of their inquiry as to whether I had fired my gun and how often, to which I replied truthfully, "*si, señores, dos.*" Furthering my ever natural bent for truth was the fact that when I saw them coming I had quickly stuffed a bird into each trouser pocket, and for all I knew their tail feathers might be even now protruding.

After much volubility on their part and very little on mine—my efforts being restricted to an endeavor to convey my extreme intimacy with the *Capitan del Puerto*—I finally managed to get it across to them that the "*otre señor*" whom they said they had seen, spoke Spanish, and let us go to him. They signified agreement and started off, motioning me to follow. Certainly they were very trustful of my pacifism, since they both walked in front of me without a turn of the head, whilst I drew up the rear with a gun in hand. Arrived at

the road near which I had supposed to be a *finca** (which turned out to be an old mill), the cross-questioning was resumed. They seemed to be very skeptical of my assertion that I had only fired two shots, which was accounted for later when I found that they had heard several of Bob's, although he had appeared before them with only a camera, having parked his shot gun in a near-by thicket. Bob not being visible at the road near the mill, my heart sank as I misunderstood the motion of one of my captors—confusing in my temporary trepidation the Spanish motions of approach and dismissal, and I started to follow them in the direction of the *casa*. Great was the relief on hearing Bob's "halloo," and on gathering from what the Majorcans said, "*Va*," that I was to rejoin *mi amigo*.

Visions of the Inquisition fading from my mind, I trudged off with assumed carelessness in the direction of the hail.

We soon joined up and, in view of circumstances and that the afternoon was drawing on, decided to "withdraw in good order." The boat we found broached to, of course, but with little difficulty got her headed seaward and, wading out across the bar,

*Equivalent of *hacienda*.

rolled in and manned the oars. Only a few minutes' pull and we, or rather Bob, could see the launch coming for us, and soon fast to it there was but a twenty minute tow to the ship. As we got nearer we saw a shore boat lying astern of the *Wawaloam* and discreetly hove up close to the launch and passed over our guns to be put under her seats and covered.

All dressed up in immaculate white was the Captain of the port, and only slightly less dressy was the French Consul. Then there was a googly-eyed gink and a youngish but weather-beaten looking man with two medals suspended from his bosom by two perpendicular safety pins.

Here was a more or less official visit of honor, finding us about half dressed and what we had on soaked. Bob fled below after salutations—I remained to do the honors.

The launch had gone around to tie up to the boat boom, and Bob's account of what he saw through his port, in view of our efforts to conceal the presence of our guns in the boat, is worthy an approximate quotation:—"One man was up on the boom. The other man picked up one shotgun and after going through a sincere if inaccurate 'manual

of arms' passed it up to the man above him. The gun was passed aboard and the same performance was repeated with the other gun."

As if this were not enough, when later we were showing the guests over the ship, there on the settee in the deck saloon lay the guns, evidently just freshly used!

The individual with the medals, who was called Francisco and who had served before the mast on several British and American vessels, was under the impression that he could speak English. This was a delusion almost as great as the captain's that he could speak Spanish. As soon as aboard I had ordered up champagne and biscuits, which proved most acceptable to all our guests with the exception of M. le docteur (the French [sic] Consul), who resolutely declined. So I urged a glass of cognac on him. This he also energetically refused and turning to Francisco requested him to explain the reason. This one laid back his head, opened his mouth, and after gazing fixedly at the main topmast head for a space of about five minutes, gave forth in a staccato manner the rather startling advice that "the docteur he very seek to hees stomach."

Bob came up and brought out the Akeley motion picture camera. There was not enough light to admit of using it, but Bob set it up and showed them how it worked. They were keenly interested, the Captain of the port in particular showing a great deal of quickness in comprehending its parts and their functions.

Francisco's English translation of *Señores* was "you fellas" and his frequent use of it was most amusing, rendered the more so by his very courteous and respectful manner. The guests were signifying intentions of departure when it occurred to us that they might care to have a glance below. This idea we passed on to Francisco, partly by means of the English language, but also in a large measure by pantomime. Francisco conferred with his associates and reported—very respectful—very dignified—"whale—if you fellas don't mind, they would very much laike to."

CHAPTER FIVE

Kindly Alcudians

MOST of one day was occupied in photography. Near Inca we espied an unusually picturesque water wheel some distance in from the road. Hoisting the Akeley over the wall, we proceeded toward the spot, carefully finding our path along the furrows between the rows of vegetables. As we approached, we were met with courteous welcome by a fine, aristocratic looking young man of quite imperious manner, who, we later found, was the proud possessor of the euphonious title of Señor Don Bartolomé Ripoll-Son Vivot. There were several workers of both sexes near and around the water wheel and they were perfectly delightful in their almost child-like joy of being taken by a real movie.

Three girls in calico dresses, and big straw hats which were pulled down so as almost to conceal their faces, and with bare feet, seemed to take particular pleasure in posing before the lens.

Bob took views from various spots and angles, and while this was going on I chanced to see, I thought, something unusual beneath the brim of one of the hats. But I could not restrain a gasp at the exquisite beauty revealed, when at Bob's request the girl tossed aside her hat.

Though "brown as a berry" from her life in the fields in the scorching sun, her skin was clear and delicate to the point of translucency. Marvelously shaded eyes of lustrous brown, but with a depth usually ascribed only to gray. Features of such fineness as to suggest a carving in some dark marble. At first, when on my insistence Bob suggested a close up, she was very shy, replaced her hat and returned to her work among the vegetables, but at a very emphatic word from Señor Ripoll-Son Vivot, she again uncovered her face, and posed splendidly with vivacity of glorious eyes and animation of manner quite engaging. Nor could the coarse dress conceal the lines of a lovely figure, and the bare feet, never cramped by the confines of the urban type shoe, were extremely pretty.

At our request, the Señor inscribed his name in our little book, so that we might be able to send him prints of some of the photographs, and with

all hands waving us a farewell across the wall, we trudged down the dusty road and back to the car.

As the sun was dipping toward the crest of the western range we came upon the little hill town of Campanet and pulled up just outside the village on a steep slope, where workers of straw shoes were busily plying their trade on small tables outside their doorways. Though they were extremely intent on their industry, they very compliantly swung their tables and benches about so as to face the road and give Bob an opportunity of making some pictures.

On deck that night, under the silver dome of myriad stars, Bob roused me from a reverie by inquiring "what were the high spots to-day?" "Bob, my boy," replied I, "there was only one high spot—la señorita Dulcinea Isabela Ripoll-Son Vivot de Inca."

The halcyon days sped by and suddenly came the realization that the week which was all that could be allotted to Alcudia was up. On the morrow the *Wawaloam* must be on her way.

As it was now Saturday, it was necessary to have to do with the local banker, but when on arrival at the *casa* and *tienda* of "toothsome" at the most

hot two o'clock conceivable, nothing in the nature of the notorious Renault or De Dietrich was to be had, the offer was made of a bicycle. The suggestion of a mule, horse or donkey would have been received with far less trepidation, but it was gratifying to find that although I had not been on a two-wheeled vehicle for probably nearly a quarter of a century, the old sense of balance still remained, at least to a considerable extent, so I pedaled into the town, which at that hour was in a condition of quiet somnolence.

Not a soul was visible for some time, but finally a very homely old man emanated from somewhere, and as he was meandering across the square I intercepted him and inquired the possibilities of routing out the banker with whom we had previously had pleasant dealings. The old man was very sympathetic and talked very slowly, seeing that I knew practically nothing of his tongue, and managed to convey to me that the banker was away in Palma and would not be back until late in the evening. He volunteered, however, to take me to the residence of the banker's assistant, whom it is to be feared we routed out from the middle of his *siesta*. This one tried to

explain to me (which, however, I was unable to grasp until looking back on the matter afterwards), that he was ready enough to cash my American Express cheques, but that he had no basis on which to figure the exchange. So the three of us went around the corner, down a little street, and up another, and once more routed out a sleeper, who took the matter with the same equanimity as had the banker's assistant, produced a Barcelona paper of a date not more than eight days previous and showed us the exchange dollars to *pesetas*. Then back to the main square where the "bank" was opened, a little light permitted to enter, and the transfer effected.

A curious small incident occurred at this time. As I was bidding farewell and, to the best of my ability, thanking the old man for his kind assistance—none of the people would ever accept any remuneration for their frequent little kindnesses—an extremely handsome little boy whom I remembered having seen once or twice before, stepped up and with a few words, the purport of which I could not catch, took hold of the old man's hand and gravely raised it to his lips. The old man turned and gave a little pat to the child, who then ran off.

Across the square, the big room of the hotel looked pleasantly dusky and comparatively cool, so I pushed my bicycle across and entering, asked the señora for her coolest bottle of beer. There were only two other individuals in the place, one of whom appeared to be asleep with his eyes open and the other reading to himself half out loud from a newspaper. Combined with the low humming of insects, the heat without, and the cool quiet of the big room, this sound added the last touch to an overwhelming soporific influence, and the next I knew, though it was only a matter of fifteen minutes later, the señora was suggesting that another bottle of beer was cooling in the well of the *patio*. Resisting the mild temptation I settled my score, and feeling now quite confident on my mechanical steed, rolled casually back to the port.

Bob was on the quay with his camera set up, taking pictures of the fishing *feluccas* as they came in, and also of some fishermen who, in their *felucca* secured to the quay, were having lunch and washing it down with long draughts from a glass *paróm*, a kind of bottle. In this particular instance it was of green glass, and much interested in its curious design, we endeavored, but were unable, to

Señorita Golondrina Ripoll-Son Vivot d'Inca -- Boy and Girl at Fountain, Pollenza, Majorca -- Two Women of Majorca

obtain a similar one on the island. It has a long spout, which is not inserted in the mouth, the bottle being held high above and a stream of the red wine flows out, and down the throats of the partakers, assuring the hygienic condition of the potation.

There was a most comic-opera costumed *carabinero* on the quay, who had with nonchalant interest been watching all of the photographing. Perhaps Bob's suggestion to this gentleman that he should pose,—the other camera subjects near to hand having been rather well covered,—aroused in his mind some dormant recollection of orders long ago received. Nevertheless he refused the honor with a bluntness tempered only by the suggestion that his "phiz" might break the camera (a not unlikely thought since he was homely as the devil), and all in the same breath, asked if we had any permit for this work. Unfortunately, Jofre, Jr., the pilot's son, replied in the negative, and the policeman immediately strode off in a manner which indicated better than words that he was away to consult with his superior in the matter. Luckily the boat was alongside, so we quickly dismantled the camera and shoved off.

Guarded inquiries subsequently revealed that while we might do all the photographing we desired inland, the water front was a sort of "zone interdit," which made us feel fine because it meant that Bob should have about five hundred feet or more of film of forbidden ground—of fortified Spanish territory, though certainly there is not a mounted gun anywhere thereabouts.

This was a strenuous day, for later on we took our small cameras and practically encircled the entire town, getting many delightful views, not only of the most interesting parts of the old walls and Roman amphitheater, where the bullfight was to be held on the morrow, but also of many representatives of the charming juvenile population.

By great good luck, Sunday was the feast day of the patron saint of Spain, *San Jaime*. All the streets and doorsteps were carefully dusted, strings of lights were spread across the square, and practically every doorway was framed with small pine trees, and branches of the same were used as decoration over and around the windows.

When we got into the square at about 8:30 that evening, it was crowded and "all ablaze with light and glory." A band was playing enthusiastically

and, to some extent, melodiously. Gorgeous fireworks were being set off at intervals, and on each of these occasions all the people in the street and on the balconies would give a big gasp of appreciation, followed by a generous round of hand clapping. From nowhere our friend Francisco arose, and proudly announced to us that he was an intimate of the matador of the morrow, especially imported from Port Mahon, Minorca. He requested the privilege of presenting him, and seeking him out of the crowd, presently brought to us a clean cut, blue-eyed youth, who at the bare suggestion of receiving prints of such pictures as we might take of his heroic actions on the morrow, immediately invited us to partake of ices with him. Ice we knew was an infrequent luxury in Alcudia, so no doubt this was the highest form of hospitality that our bullfighter could offer. While we were waiting for the appearance of our refreshment, the ladies greatly intrigued our host by their inquiries as to his state of mind regarding the contest of the morrow and elicited from him that he was *muy contento*, the phrase being delivered with well thrown out chest and flashing eye.

After the ices we repaired to the dressing room

of the movie theater, which up to that time we had not known existed as there was no sign on the outside of the building to indicate its nature, and were shown with great evidence of pride, the cloaks, swords and other paraphernalia of the bull ring.

The ancient cars were requisitioned to take us to twelve-o'clock Mass on Sunday, and with Maria, the much scrubbed and bestarched daughter of Saber-tooth, perched on my left knee, we skimmed along the road from the port to the town.

Had we set out to imitate as closely as possible the most obnoxious type of American tourist, we would scarcely have committed more social blunders than we did on this occasion. Though we were in good time, arriving certainly before five minutes past the hour, the congregation was already assembled and a benevolent old priest was in the midst of a most positive address. Neglecting the custom which is characteristic of Spanish Catholic as well as some American Protestant sects, that sexes be separated, we seated ourselves regardless. Kay and I chanced to find seats in the last, that is to say back row of the men's portion, which

turned out to be reserved for the elders. During certain parts of the service all the men stood up while the women, who formed the rear half of the congregation, remained seated. When we observed that we were thus out of place, Kay moved over to a seat along the wall, but I was left amongst the elders, refulgent in white clothes, glaringly in contrast to the somber garb of the men in the row.

Not only were there times when all the men stood while the women remained seated, but there were also times when only the elders on the line of benches where I was installed arose to be addressed apparently with kindly admonitions from the altar, so of course I, unnoticing, popped up with the others, before realizing in what august section I was.

During the elevation of the host, something in the nature of an icon was passed to and touched by the person on the inside end of each pew, who then passed on the touch to his next neighbor. Unfortunately I did not observe immediately what was in progress, and when the man next to me extended his hand in friendly fashion, I could only think that he had just noticed me and was extending his hand in greeting, another sample of the kindliness

to which we had become accustomed, and warmly shook it! However, it seemed, and certainly must be hoped that our innocent blunders were taken as such by the people.

When we had recovered from the mortification caused by our unwitting errors, it was pleasant to relax in the comparative cool and partial dusk, listening to the sonorous tones from the pulpit or altar, or the melodious droning of the organ.

After Mass the congregation reassembled to some extent without the side entrance of the church and a large section, accompanied by the band, escorted the priests homeward.

We chatted, that is to say we uttered words and made signs to the Captain of the port and the French Consul, who was accompanied by a most charming señorita, about whom speculations were rife as to whether she was wife or daughter. As a matter of fact she turned out to be a niece visiting from Palma. Then we returned to the ship for our noontime repast and preparations for attending the annual bullfight.

On the way to church Grace had presented a parcel containing a little present to Maria, and the innate delicacy of the child's manners under the

circumstances was charming. She was evidently consumed with curiosity to know what the contents of the packet might be, but with great self-restraint, contented herself with surreptitious peeps occasionally.

Reports of the hour of the *Toros* were characteristically Spanish. The posters announced the commencement of activities as four o'clock, but other advices were to the effect that if we arrived at four, four-thirty, five or five-thirty, we should be in ample time for the festivities.

Arriving at the dock, we were again welcomed by Juan Jofre and his still clean and bestarched daughter, who was evidently again to accompany us. There was also a note from the French Consul, requesting our attendance at his residence and company to the fight.

It turned out that the name of Alcudia's patron saint and that of the French Consul were the same, and also that it was the Consul's birthday, in consequence of which neighbors had joined in friendly offerings of cakes, sweetmeats, and so forth, so that when we arrived at his house we were regaled with these and treated to a glass of the most delicious cordial.

A few paces without the wall to the north of the town and on a little eminence was the half-ruined amphitheater where many a gladiator might very well have fought his last. Studded about with the deep blue waters of Alcudia and Pollenza Bays, and partially encircled by the splendid crests of the western mountains, a more charming setting would be hard to find. Though the heat was great, there was a brisk breeze and a clearness to the air, which, with occasional wind scuds along the mountains or the horizon, made such an afternoon as one associates at home with the first days of early Autumn.

Since the advertised price of admission was eight *pesetas*, we had been somewhat exercised at the large expense to which the Consul would be put if we actually attended as his guests. Our worries were groundless, however, as his kit of medical instruments, brought along in case of casualty to any of the bullfighters, proved sufficient pass for all.

When practically the entire population of the town had assembled, and they very little more than half filled the circles of huge stones, the gates were thrown open, and amidst great enthusiasm, not unmixed with a considerable amount of laughter, a youth dashed into the arena, mounted on an

emaciated nag, which, from its method of holding its nose as straight as possible up into the air, led us to believe that it was more accustomed to repeated jerks on the reins when dragging one of the two-wheeled carts than to the bull ring.

The rider was caparisoned in a white shirt, blue cotton trousers and an ordinary gray cap pulled well down on his ears, the only indication of his profession being a red sash about his waist. He was without a saddle and appeared to retain his seat by holding tenaciously on to the reins. He advanced to the nearer end of the ring and pulling up, attempted to make a sweeping gesture in the direction of the principle box where was assembled the "*jefe politico*" and other distinguished functionaries. The effect of this was rather spoiled, however, by the fact of his loosening his cap to such an extent that it went flying away across the arena.

This *caballero* was followed by a Ford car full of variously dressed bullfighters, these also indicating by only one or another portion of their attire, the nature of the fray in which they were about to engage. Dashing once madly round the ring and out of the gates, this chariot full was reminiscent

of nothing so much as the clowns in old Madison Square Garden of precious memory.

And now for the *Toros!* The gates from the paddock were flung wide and in gamboled the most ungainly young animal, who seemed all horns and legs. The *toreadors* turned out to be quite as clumsy as the beast. This first bull was not to be *por la muerte*, and as it did not appear to bear any ill will at the teasing it received, the tumbles of the men as they tripped over their *serapes* and rolled around in the very shadow of the unhostile horns, was altogether delightfully ridiculous.

Then came the second bull, who was to meet his gory end. He showed rather less activity and little more fight than did the first bull, if exhibiting more signs of annoyance at the awkward efforts of the *banderilleros* to insert their darts in his shoulders. Our "*muy contento*" hero of the preceding evening had been selected to administer the *coup de grace* to this *toro*, and accepting him at his own valuation we looked to see prodigious feats with the sword. Alas, however, his efforts to dispatch the bull were quite as clumsy as his ungainly moves to get out of the way. Once he fell flat on his face directly in the bull's path and had the animal had really vi-

cious intentions, could not have failed being badly gored, or at least losing the seat of his breeches. Repeated failure to accomplish his purpose finally led to temporary cessation of hostilities, during which the bull was entirely ignored while the bull-fighters engaged in heated argument as to who should replace the young gentleman from Port Mahon. The new artist was scarcely more adept than his predecessor, but eventually after one sword had been left sticking through the bull's shoulder and another bent and straightened out by the crude method of stepping on the point and pulling up on the handle, the bull finally lost blood enough to sink down against the palisade and was despatched by a stiletto through the brain.

It cannot be said that the ladies of our party showed any enthusiasm over the sanguinary sport, in fact they retired one by one, so that none of them were "in at the death" so to speak.

We did not await the end of the third bull, but welcoming the French Consul's suggestion that we should leave early "to avoid the rush" strolled leisurely toward his residence. Here we found that an even greater number of good things had been spread, and the señora cut for each of us a

huge piece of cake. We were appalled at the immensity of her generosity, not seeing how it would be possible for us to consume such a quantity as she insisted on each one of us accepting, but it turned out to be so light and delicious that we easily managed to consume our shares.

The Consul was almost in the act of drawing the cork from a bottle of champagne which he had pulled up out of the well in the patio, when sounds of music fell on our ears and we all accompanied out host to the foyer, outside of which in the narrow street the band from the bull ring had regathered and were serenading the birthday boy. After several airs had been played (the last one of which appeared to have been written specially for the occasion, as small boys held up sheets of music before the eyes of the musicians) the entire band, which consisted not of professionals but a collection of tradesmen, farmers and fishermen, proceeded through into the patio, where they were all regaled with the good things from the dining table. And now the Consul did indeed pop the corks, and his health having been first toasted, that of every other member of the household was drunk, then came our turn. All this was followed by the most sincere

expressions of mutual goodwill on both sides and an exchange of cards, with most earnest hope on the part of the Majorcans that they would hear from us.

With renewed farewells, we piled into the car. As we were just about to dash off, one of the girls exclaimed "This is the happiest afternoon I have known in months." Bob motioned to the chauffeur to delay a moment and translated the words. With beaming faces, they all replied in Spanish "for us also."

So it was with real sadness and regret that we left these simple, honest, kindly people, all of us feeling, I think, that we had seen the nearest approach to a little bit of Arcadia that it had ever been our good fortune to encounter.

CHAPTER SIX

Dragonera and the Columbretes

DURING our stay in Alcudia Bay the wind had been at least fresh nearly all the time. When we got under way on the evening of July 25th the same condition existed. The wind was strong and head, with considerable sea running, so that for a while it looked as if we would be compelled to anchor again on a lee shore. But with some assistance from the engines we just managed to beat out and by daylight had rounded Cape Formentor and were headed southwest.

Although on the coast off which we now were the pilot book mentions a town by the name of Soller, credits it with 10,000 inhabitants, and says that it is only a short distance inland, it must snuggle deeply into the mountains, for we were unable to locate even the port, though we scanned every inch of the shore through the glasses.

About noon the island of Dragonera, our objective, was raised, and in a few hours more we were nearly up to it.

Many shearwaters were in evidence and schools of porpoises played about on two occasions. From the jibboom martingale, Bob harpooned one, which probably dived under the ship, and rising again on the other side, bent the harpoon against the keel, tearing it out. When hove in, the iron looked like a hairpin.

The amazing face of Dragonera rises to a height of over 1000 feet. While it is thus some 300 feet less than Gibraltar, it is far more impressive, rearing itself so straight out of the sea that the lighthouse on the top may still be seen from a boat only a few yards off the base of the cliff. So frequently was the lighthouse obscured by clouds, that it has long been abandoned, and two substitute ones built at each end of the island at much lower levels.

During the afternoon it became necessary to stop the engine for repairs and we took the opportunity of going off in the launch. To his delight, Bob found the body of a Moroccoan shearwater—*P. puffinus mauretanicus*. Unfortunately the body was too decomposed for preservation.

Dragonera is separated from the mainland of Majorca by a channel not over a few hundred yards wide in places, and very rock strewn. As the seaward side of the island offered no possible landing

place—even for a goat—we ran back a short distance and around the north end. The south end of the island had almost been reached when we espied a little bay having apparently good water and a small, but excellently constructed cement breakwater. At the head of this were some treacherous rocks, but these once circled, the landing was simple enough.

Now could be seen two women, a man and a little child seated in the porch of a hut a short way off. As we approached a ferocious-looking dog, hair erect, advanced with growlings most threatening, and seemed only restrained from attacking us by very emphatic words from the man. This one made us most welcome and brought out chairs for us. The dog in the meantime had decided that I was O.K. and very much made up to me. Mindful of his earlier attitude, and not wishing to create a resumption of antagonism, I repulsed him gently. He was insistent, however, and for months after one of his fleas or a descendant, emerged from somewhere to make me scratch.

It was learned that there were no inhabitants on the island with the exception of the two lighthouse keepers and their families, of which this was one.

There was a little cultivation near the house, and some goats, otherwise Dragonera was just one huge rock with some patches of coarse vegetation and loose rocks scattered over it. We were assured that we had the freedom of the island, and after obtaining information as to anchorage, returned to the ship, exchanged the launch for the dinghy and went out to bait for birds. We were not over five minutes from the ship when the birds began to come, big shearwaters, and they came in such numbers that it was difficult sometimes to decide for which one to try. Regardless of their dead or wounded, or of our firing, more shearwaters continued to come and circle about, uttering their raucous cries.

Another Manx shearwater was seen, this time a live one, at which Bob fired and to our disappointment, missed.

We had great hopes that here we would find the very rare Audouin's gull. We saw only one individual, at which I fired twice, that could not be identified as a common species. Bob said it was almost certainly not Audouin's but whether this, together with his assurance that I had certainly hit the bird, was intended largely to soothe my feelings, it would be impossible to say.

When it grew too dark to shoot we gathered in the casualties, collecting eighteen. They were all the same—great Mediterranean shearwater, of which we already had two. A wounded one, when approached, would draw back its head and with wicked eye and vicious hiss, await the moment to make a strong, quick thrust with its dangerous beak, at an incautiously extended hand.

At our captain's suggestion, though his reasons were, to say the least, vague and weak, we lay off and on for the night in a rather uncomfortable swell, but anchored in the morning on the bearing which had been indicated by the lighthouse keeper.

Fortifying ourselves at seven o'clock with a cup of coffee and piece of toast, Bob and I landed the Akeley and proceeded to pack it up to the crest of the island. Bob's share of the lot was certainly the harder as he had the camera itself, while I trailed along with the much less weight of the tripod, which however made up to some extent by the clumsiness of its shape what it lacked in pounds, as the legs kept opening up and getting entangled with mine and with the bushes.

The ascent of course was on the side of the island toward Majorca, through shrub growth of a cling-

ing, prickly nature, and the path, if one might call it that, was covered with loose small sharp rock. Besides which, the heat soon became intense, and on the crest, some four or five hundred feet up, across which a cooling breeze swept, we were indeed glad to lay down our burdens and take a very brief spell before setting up the camera.

The only living things which we saw during this ascent were lizards, all of nearly the same size, never exceeding five or six inches in length, but varying very considerably in color, though Bob declared them to be in his opinion, without exception, species of wall lizard common all about the Mediterranean.*

As they never had to cover more than a few inches to be safe under some rock or stone, it was impossible to grasp them in the hand. If they did not secure timely safety by totally disappearing they would seek the shelter of the shrub growth, where the coloration made them very difficult to see. It would then be possible to walk away for a short distance and shoot them with a 36 gauge, provided the lizards were still there, of which one could never be sure, as at a distance of over two or

**Lacerta muralis lilfordi.*

three feet they would be invisible. One was shot in the open, on the rock, and though when we picked up the body it was quite dead, the tail,—which had been projected to a distance which we carefully estimated as being very close to four feet,—was still jumping around like a chicken with its head off.

The theory for the lizard being able to drop its tail—with which it only need dispense temporarily as it quickly grows again,—is that, being the most conspicuous, it is the most likely to be siezed by birds of prey, and discarded, may occupy the enemy for a sufficient time to allow the rest of the lizard to escape.

When a considerable amount of film had been used "pamming" the ascent up which we had just come, and the face of the great rock, (which owing to the fact that we were on a head that jutted out beyond it somewhat) was in full view with the waves breaking on its base, we stepped out to seek the very summit.

In years past there had been a path which criss-crossed its way back and forth up the east side, but this had long since become covered with loose stone, and traversing it was foot-wearying work indeed.

From the broken and neglected lamp chamber of the lighthouse on the top we could, by a little leaning, look straight down a thousand feet to the green water, undisturbed by one ripple on its smooth surface, though where we were, a cold piercing wind swept through the dilapidated tower. A tablet over the main entrance of what had been the keeper's house, bore the inscription "*Fernando e Isabella II, 1851.*" The buildings had once been quite extensive, and no doubt these misled monarchs had had their names thus engraved with self-congratulatory feelings that they had constructed the highest lighthouse in the world, and had no conception of the futility of their building.

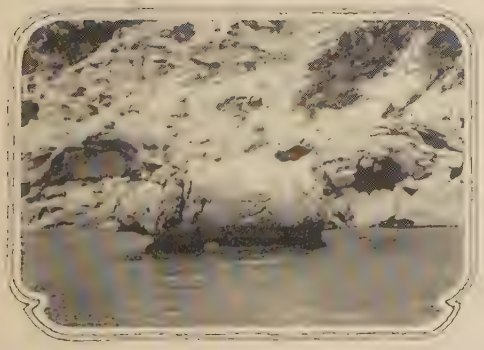
Naturalistically we found little to interest us. The only mammals were the domestic pig and goat more or less run wild and Bob could identify but one land bird, the red-legged partridge. We found several cuttle fish pens and sea snail shells, showing that the gulls evidently carry these foods to these great heights before devouring or even partitioning. Along the sides of the old path were a good many large onion-like bulbs, to which a single long-stalked white lily with yellow heart was sometimes attached. This is a variety of asphodel.

In view of our light and early breakfast, lunch was indeed welcome when we went aboard again at one o'clock, but we tarried not long over it as we had an appointment with the lighthouse keeper, who had volunteered himself as our guide for sea birds along the top of the cliff. When we arrived at his domicile he was not on hand, and as the women informed us that he was down toward the northern light, we set off in that direction along what was almost a road. Presently he came along, and though exhibiting the most sincere willingness to conduct us wherever we might like to go, explained that in view of the high wind which had now come up, it was useless to seek birds along the cliffs. So at his hospitable insistence, we repaired to the lighthouse with him, over which he took pleasure in showing us. He explained that he did not live there because he had the cultivation close to his hut near the little bay and preferred to make the mile long round walk twice a day.

Though unoccupied, the house was immaculate in its shining tilework, and was quite reminiscent of the cleanliness of a Childs' restaurant, though distinctly more æsthetic in the lovely color and decoration of its tiles.

Antonio Massenet, such being the euphonious, not to say literary-sounding cognomen of our host, took us into his spotless kitchen and insisted upon our accepting a glass of lemonade. As he drew the clear water from the well and squeezed the big, luscious lemons, and while we sipped our beverages, he gave forth an amazingly erudite and convincing dissertation on Spanish literature. Of course I could understand very little of what he said and can only rely on Bob's translation of his remarks. They were in general to the effect that while he acknowledged the superiority of Cervantes in prose, in Spanish literary history, of Velásquez in painting and of Calderon in poetry, he deplored the tremendous lack of appreciation accorded by non-Spaniards to this or that novelist, artist or poet.

How many persons in a similar walk of life could be found in the United States of America, to discuss intelligently the creative achievements of their national artists. Yet here was one of two men living on a virtually deserted island, a member of a race probably deprecated by most North Americans, who was fully capable of delivering a fifteen minute lecture, not only on the merits of his national artists as they appealed to him, but to



Steps Leading to Smugglers' Cave -- Curious Strata Effects -- There Were Many Caves Like This in Alcudia Bay -- What Looks Like a Fossilized Rhinocerous

demonstrate a knowledge of their comparative impressions on the outside world.

On starting to walk back toward the landing, Señor Massenet brought forth a shotgun, which, though indeed of somewhat ancient make, (it was a hammer gun) was a splendid piece of gunsmith's work of its period. We inquired why the firearm if there was no possibility of securing sea birds, and he suggested with a twinkle that though the "Law" was on, we might get a partridge. He showed great surprise when we announced our intention of again going up to the crest, so we explained that we had left the camera there. At this, without speaking he stopped and lowered his gun, and we paused in the path awaiting the result of the deep contemplation into which he had fallen. After a few seconds of abstraction he roused himself and asked, "Why did you leave the camera up there. Does it take pictures of its own accord?"

Now at first thought this might appear a very bucolic question, but after all was this not evidence of excellent reasoning powers and of imagination as well? No doubt his line of thought must have been something like this. "Two men make a hot, stony and otherwise strenuous trip

to take pictures, and coming down leave their picture taking machine behind them, so they must go seek it and make the same difficult trip once more. As they are apparently otherwise reasonably sane, it must be that a new mechanical process has been invented whereby the picture taking machine can be left to work by itself." Unfortunately he did not go the necessary extra step and figure that with change of sun and shade, the views which we now proposed to take would be very different from those done in the morning.

As we trudged along down the road, Bob and Massenet carrying on a desultory conversation, the former chanced to inquire of the latter if he spoke French. The reply, which it might be remarked, has no place in Bob's notes, was "Oh, very little, scarcely more than you speak Spanish!"

Deciding that we might be able to make a short cut across to the crest without going all the way back to the landing place, we asked Massenet to take along one of our guns and some other gear. At the same time we arranged with him to pick him up off the northern lighthouse point at an early hour next morning, so that he might indicate

to us the best probable location along the western cliff for getting at sea birds.

Previous mention had been made of a proper recompense for his services in any undertaking in which he assisted us, and though he had intimated at the time that he wanted no remuneration, we now suggested that in as much as he was little in communication with the outside, a bottle of cognac might be relished, but while expressing his appreciation of our thought, he replied that "when *caballeros* did him the honor to come on a visit to his island, it was his great happiness to show it to them and do as much for them as lay in his power, and that he did not wish to consider return in any kind."

On this second pilgrimage to the top we found a small grove of pine trees, representing the only shade of any kind on the island. The way which we took across several ravines was even more difficult and uncomfortable under foot than the approach to a path which we had used in the morning.

Arriving where we had left the camera partially sheltered behind and beneath some large rocks, we took a few minutes to cool off in the fresh sea breeze. Then Bob started to work to get some more film, I trying to assist in setting up the camera.

But Bob's insistence on choosing a spot where his heels just hooked over the edge, and kept crumbling bits of the cliff which dropped silently into space, turned stomach and knees so to water that my help was probably of little good. Finally he got rather peeved at my protests on his position and asked if I didn't think he valued his life as much as I did.

As dusk was coming on we staggered under our load up to the Massenet mansion; in a few minutes the launch came in and we staggered down to it and eventually up the gangway and flopped into deck chairs. There had been many busy days since our arrival at Alcudia, but this was the most strenuous by far.

Weary as we were the storm that came up about two o'clock in the morning aroused us as it would surely have any but dead men. For three hours we stood by—all hands—both anchors out, engine going at slow to take the strain off the anchor chains. At last about five the wind suddenly abated and an old moon showed itself for a few minutes, before dropping below the land to the east. One and one-half minutes later we dropped into our bunks.

But such a sea had been kicked up that we despaired the following morning of keeping our appointment with Massenet. Still we determined to make the attempt. About seven, Bob and I landed, instructing the launch man to wait about half an hour and then proceed northward with the object of possibly effecting a landing at the northern lighthouse. A simple code of signals was arranged so that we would be able to direct the men in the boat.

By the time the lighthouse was reached (on foot), the launch could be seen coming up the channel—and she was making very bad weather of it. Before she got within half a mile it was quite evident that not only could she not make it, but that her further progress would most likely result in disaster. So we made the appointed signal indicating "return," and ourselves regretfully hoofed it back to the sheltered landing place at Massenet's *finca*.

Hoping that a lee might be found at the other end, we joined up with the launch and ran southward. Twice the effort was made to round the point, but the first time no progress was made, and after the second endeavor in which we made a bigger swing, so hoping to avoid the back wash from the rock, we were thankful to get back and

that our light boat, though nearly half full of water, had not been completely swamped and the engine put out of commission.

Still these efforts were not entirely fruitless, as Bob secured a beautiful small falcon (*Falco eleonoræ*) with a perfectly magnificent shot,—the bird seemed entirely out of range and was so nearly overhead that it dropped almost in the boat.

There were several of these graceful birds wheeling about, for the most part well out of gunshot. Sometimes they would drop with folded wings several hundred feet. This was a most interesting thing to see, but so amazingly fast that the eye could not always follow. More than once was heard a sound as of a violin wire snapping, and out of nowhere would appear a bird, wings now extended, gracefully soaring.

Bob was of the opinion that this was all in play, but I question whether the dive may not have been after insects or butterflies too small at that distance for the eye to catch.

Right at the southern tip of Dragonera we dynamited and in addition to a considerable number of the little black, blue and gilded fish (*Chromis chromis*)—which had composed the larger part of

our catches at Alcudia, also secured two species new to us, a kind of sole, and a viperfish of which Bob bade me "have a care."

By now the wind had come up again and the sea was continually increasing. We returned, passing close by the *Wawaloam* and hailed orders to get under way. Another submarine charge near a rock in the middle of the channel netted us nothing new, and we rejoined the ship just as the second anchor came into sight.

As the ship rounded the island, high above a number of falcons were attacking a large hawk or eagle. Also we saw for the first time one or two ospreys.

There had been little time for any taxidermy, and now Bob found that some of his shearwater were going bad. A bird, at least a sea bird, always seems to show first signs of dissolution by the neck feathers falling. So Bob set to skinning them and except for an hour at dinner time, worked through till one o'clock in the morning, the girls helping to scrape off the fat and I bearing a hand when not on watch.

Early on the following morning we raised the rocks of the Columbretes. With the exception of

the main island, on which there is a lighthouse, and which is perhaps 200 acres in extent, they are but a scattered group of rocks lying about twenty-two miles east of Valencia, Spain, and covering an area perhaps seven or eight miles in circumference. Vicious looking things they are, as they raise their jagged sides high in the air or just reveal themselves as receding seas expose them momentarily to view. Horrid is the thought of a ship getting amongst them in storm or fog.

Going off in the launch, we approached the pinnacle called "*El Barquentin*," which with a hole through it, has the effect of a Gothic arch, and gives the impression of some ruined medieval spire.

Except for two falcons circling about overhead and two Mediterranean yellow-legged gulls, no bird life was visible.

The next island, Horadada, was also but a massive rock without vegetation, other than a clump of prickly pear. Here we landed. While there were signs that sea birds had nested in some of the holes, there was no evidence of their recent occupation and the only point of interest we could find was a small, temporarily land-locked pool, in which there were a good many fish, apparently all of the same

species and not running over about six inches in length. We dynamited this little pond and a geyser of water surely thirty or forty feet in height leaped up into the air, but the explosion must have either thrown most of the fish back into the ocean or way up on to the land, as we only secured three specimens.

In a bay on the main island of the Columbretes, which shows quite clearly that it was once the crater of a volcano, we set off our last charge, but with disappointingly small luck. We bagged a good many fishes, but practically all of them were of the same little bluish, prickly species previously referred to.

Bob was always quite upset at the paucity of our fish catches, and invariably made invidious comparisons on the results obtained by explosives in the Humboldt Current.

There seemed little more to hold our attention at the Columbretes. Bob's time was up. Winds were light or perverse. We returned on board and set all sail for Marseilles.

CHAPTER SEVEN

Flying with a Madman

IT was our good fortune to arrive at Marseilles in the early afternoon of a gorgeous day, particularly good fortune, because being Sunday, the water and picturesque shores of the harbor were alive with people indulging in a continental Sunday afternoon, picnicing, fishing, boating and enjoying themselves generally.

As we passed the striking mass of Château d'If, surmounted with its cylindrical tower, how curious, one thought, that the world knows of it so little through its true and interesting history and the many real people confined there, but rather through a novel and a purely fictitious character,—the Count of Monte Cristo.

High above the city to the right on the peak of a lofty, bare hill, so markedly in contrast to the luxuriant verdure along the Grand Corniche, stands the Church of Notre Dame de la Garde, with its single spire, surmounted by a huge gilded statue of the Virgin, rising in lofty slimness above.

Across the mouth of the old harbor is a most extraordinary aerial ferry. It hangs so low that it might easily be struck by the mast of even a small ship, and one is at a loss to understand the economic causes which made its origin necessary or continuance possible. The cost of construction of the massive suspension must have been enormous, and surely an ordinary water ferryboat would have fulfilled the purpose of transferring passengers and vehicles equally well.

The pilot came aboard and directed us into the east or old harbor, and finally, not without the difficulties to which we had become used when there was occasion to anchor or up anchor, dock or undock, were moored stern on to the quay.

Ship Agents must have some telepathic sense denied ordinary humans, unless indeed it can be that they are forewarned and forearmed by commission-seeking captains. However unexpectedly you may enter a harbor or port, invariably they are awaiting you on the dock and equally inevitably they are acquainted with your last port of call, your mechanical and other requirements, not to mention the number of crew, the quality of the

fuel required, and indeed all details connected with the vessel.

In this instance I found both members of the firm of Coumes & Kennedy in converse with the captain even before the gangway had been stretched from the stern to the quay. Agents are always animated Bradshaws, and so we were able to ascertain immediately that there was a train that evening which would take Grace to Lyons, where a change would enable her to join her children near Geneva on the following day. So the sad and depressing breaking up of our happy party began.

Next day was spent by all in sight-seeing, though by the remaining ladies more in the shopping for which every new place smees to offer the feminine complex an irristible temptation. There may be nothing to buy worth buying, and there may be nothing that they want anyhow, but turn them loose for two hours and inevitably they will return with an armful of packages.

That evening we had to bid a tearful farewell to Bob, so that I was left to chaperon three ladies to "La Reserve," a hotel-restaurant well out on the Grand Corniche above the upper, outer bay and overlooking the Château d'If and other islands,

an impressive panorama in the fading twilight.

The next day, all arrangements with Kennedy for work to be done on the vessel being completed, we took the night train for Paris.

From Paris, London was reached by aeroplane. There came an encouraging letter from steward Downer, advising that the bos'un, who had mashed his nose a bit in getting up a trunk on the last day at Marseilles, had been found to have broken it, that Campbell the launchman had broken his wrist, and that the two of them had gone to hospital; that the captain had dysentery and had gone to bed.

In Oxford, where he was attending the British Association for the advancement of Science, I missed Bob, but a day or two later he came to London and after a pleasant lunch with the entire family at their hotel, Bob and I went over to the British Museum of Natural History. Here he occupied himself so interestedly in the matter of securing a collector-taxidermist to accompany the forthcoming trip, that before leaving London I was able to close with one Ogilvie Gordon—subject to a two weeks' option by the American Museum of Natural History. This option the Museum did not exercise, so Gordon later joined us at Marseilles.

A week in London, then back to Paris—by the Imperial Airways this time—after that a fortnight's vacation in Switzerland.

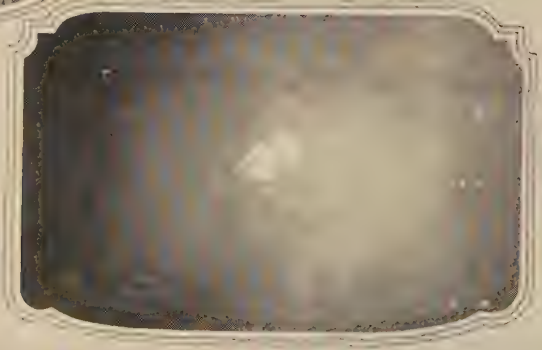
Returning from there, we reached Lyons at about half past two one afternoon late in August. We figured that we had ample time to get out to the Aerodrome and catch the plane due to leave at 3.45 P.M. on arrival of the mail plane from Geneva, but unfortunately, the station master was a bit off his feed that day and was taking it out on one of the baggage porters, the rest of them standing round to admire his vocabulary and calisthenics. The conversation was so amazingly fast that I could not follow it. Whenever there was a lull, I tried to put in a word about the trunk, but nobody paid the slightest attention whatever, merely reverting to the verbal contest with renewed ardor.

When finally the trunk was dug out, it was twenty minutes past three and the flying field half an hour away. And then ensued the most tantalizing string of red tape imaginable. The porter went with me to one office, where, after an interminable setting of scales, the trunk was finally weighed. A long form of some kind was filled in and I held out my hand begging to know the amount that I

was to be charged, but no, we now had to make another eighth of a mile to another *guichet*. Another long form had to be gone through, this time with a girl, who filled it in pausing at each column to have a merry jest with a girl friend who was calling on her. When this form was finally completed, nobody had change for a fifty franc note, worth in the then state of the franc about $1.60. This made it necessary to go and find change somewhere else, so that by the time we got into a taxicab, guaranteed the fleetest in Lyons, we had a scant fifteen minutes to catch our *Avion*.

It was the maddest twenty minutes ride imaginable, probably eight times as dangerous as the two subsequent hours in the plane. When we got to the field we found the Geneva plane for Marseilles, which was a small six seater, we being the only passengers, as it turned out.

In the room—it could hardly be called an office—where I bought the tickets there was, besides the two officials present, a handsome young aviator, to judge by his dress, of amazing egoism, who was evidently a right merry wag or at least so considered himself—one of these smart guys. He kept up an interminable running line of repartee with two other



The Second Seal, a Species Almost Extinct -- The Oceanographic Museum at Monaco -- El Barquentin, Columbrettes -- Huge Jelly Fish, Two Feet in Diameter, Alcudia

men in the room and I immediately set him down as quite dizzy. As we were getting into the plane he came along buttoning up his suit and putting on his helmet. Foolishly I exclaimed, "My lord, that man is to be our pilot and he is entirely mad!"

Quite different was this little plane from the big twelve and fourteen seated Handley-Page's that ferry between Paris and London. Only one strut between the body and the end of the wings and how near the ends seemed. As soon as he stepped into the plane our pilot threw nonsense overboard, though he did bank very severely in rising. Once up he settled down seriously to his task albeit we were rather upset a few times to have him entirely ignore his controls in order to tinker with some dial on the board to his left, or get out and write up his log or open the little port to indicate some of the places we were passing. On these last occasions it was impossible to hear a word, but we nodded and smiled intelligently with the hope of getting him back to the wheel.

It was a very interesting flight, particularly when we got over the Pyrenees, though one could not help wondering whether a successful landing could possibly be managed in such country.

It was impossible to see directly ahead of the plane, and as we could make out no sign of Marseilles, it was a little disturbing when suddenly, just as we were over what appeared to be a large bay—we could see nothing but water below—the engine stopped and the machine commenced to descend. Indeed it is always with something of a start that one hears the engine stop and feels the plane dip landward. I stepped to the front and peeped out at the aviator, who smiled at me genially, but I verily believe he would have done so with equal *sang froid* had we been coming down unintentionally, so it was not any great reassurance. In a moment, however, we could see a big chalk circle with a cross in it on the other side of the bay and knew that the field must be just ahead of us. We swooped to the other end of the field, swung about in a 45° bank and dropped gently almost at the doors of the hangar. Truly a beautiful piece of landing.

There were two rather large flat parcels in the plane, and these with our baggage and selves were transferred to a car. Twenty minutes was then spent in seeking for the mail bags which should have been transferred from the Geneva plane, which

somebody had forgotten to do, and in casting aspersions on those responsible for the omission. Having lost this time, the driver of the car evidently decided that he was going to make up what he could of it. It was twenty miles into Marseilles and he immediately opened out at a terrific pace. I shouted in the ear of the pilot who was seated in front that the driver was in error, that he was not in a plane, but on *terra firma* where a speed of 60 miles an hour did not make for safety as in the ether. This remark seemed to encourage the chauffeur to even greater efforts and finally I had to appeal to him in really emphatic accents. It was the second fearful ride of the day, made the worse by the fact that the car had no silencer, making it impossible to converse except by putting one's lips to the ear and shouting. But we arrived safely though our speed was only a trifle decreased until reaching the city.

At the hotel we found a notice to the effect that there was a wire for us at the post office. We jumped into a taxi and went there, to find it was from Kennedy saying that the P. & O. steamer *China* on which we had arranged to make the journey to Gibraltar to join up with the *Wawaloam*,

would not sail until Saturday morning. Then we ran down to Kennedy's office and there were advised that the *Wawaloam* had sailed only half an hour before, so we dashed on up round the Corniche, and sure enough, there she was plodding along just off the Château d'If. Well, there was no way of recalling her then, so we resigned ourselves to waiting for the *China* and once more, as the dusk was falling, looked out from the terrace of "La Reserve" across the darkening sea.

CHAPTER EIGHT

Marseilles—Gibraltar—Alboran Island

ON our first arrival at Marseilles, Bob had taken us to the Hotel des Phoceens, reputed as producing the best bouillabaisse in Marseilles, that is to say in the world. Unfortunately the hotel was closed, undergoing repairs, and we had to content ourselves with a very excellent "second best" of the local dish just around the corner on the Rue de Beauvais. But now, the repairs having been completed, we were able to enjoy the dish in its perfection, and right in the middle of it, giving an upward, stony stare, was our old wall-eyed friend of Majorca—(*Uranoscopus*) the stargazer.

The *China* proved to be the oldest vessel in the passenger service of the P. & O. Company. Through the good offices of Mr. Kennedy we had secured the only room with a bath on board. This turned out to be a grave error. The *China* was homeward bound from India, having put in at Malta, than

which there is no place more notorious for vermin, consequently she was fairly alive with cockroaches, and the perpetual damp of the bathroom floor and the rot of the wood trim around the edge, made our quarters a great attraction to them. As a matter of fact we did not notice them much until along in the evening after dinner, but as the evening wore on their numbers increased rapidly. The Purser was turned in and so was the Chief Steward; however the night steward was finally induced to show us to another room for the night. Here we left on the light throughout the hours of darkness, and it would have been difficult to say which was the more unpleasant, to be run about on by live stock, or to be perpetually wakened up with the glare of the light in one's eyes—a matter of choice perhaps.

When I emerged from the room in the morning the steward whose charge it was was standing in the passage, and his jaw dropped as he beheld me. He glanced at the number and then back at me, finally exclaiming, "I thought that room was unoccupied," so I felt called upon to give a word of explanation. He was quite sympathetic when I described the situation, and in most solicitous tones, asked 'Ow, were they those big Bombay

ones, sir, those two inch chaps?" I told him no, that they were not of any extraordinary dimension, but were quite numerous.

Knowing how strict were the regulations in regard to arms and even cameras at Gibraltar, we were prepared for some difficulty in obtaining some of the supplies which we required, particularly explosives and ammunition. Our trepidation was not lessened by Gordon, though a British subject, having his shotgun taken away from him on landing.

In regard to shotgun ammunition we had no difficulty as to quantity, though quality and size were not altogether satisfactory. Our agent, Ródriguez, an enormous Spanish Jew who had the sleeping sickness, and was reminiscent of Mr. Wardle's fat boy, secured some .22 caliber cartridges from—so he told us—Algeciras on the Spanish side. But he balked on the dynamite. So the United States Consul was appealed to. The Hon. R. L. Sprague is a most charming, cultivated man, partly Spanish, I believe,—his father had held the same office at Gibraltar. He is very popular with every one and much liked and respected by the British civil and military authorities. Indeed I have found

United States Consuls generally not nearly so black as they are usually painted. Mr. Sprague promised every assistance in his power and made no doubt of eventual success, though owing to the illness of the Admiral with whom he was very intimate, he said that some little time might elapse.

At this same interview I also expressed a desire to secure a letter from the Spanish Consul-General to the lighthouse keeper in Alboran. This the Consul also promised to endeavor to obtain. A communication to the hotel was promised when matters were lined up.

Two days later this came and Mr. Sprague and I sought the Navy Yard. Here we met officer after officer, each one with a little more gold lace on his white uniform than the last. It soon became apparent that the United States Navy has by no means a monopoly in the gentle art of passing the buck. Finally we were in the very anteroom of the Admiral who presently sent out his Chief of Staff (he must have had two pounds of gold braid on him) with compliments and deepest regrets that the Admiral was so busy. However the C. of S. had an order directing the city engineer to give us some dynamite if he had it. "And if he hasn't it is be-

Roman Amphitheatre, Alcudia -- Ancient Walls near the Town

cause he has used it all up," said the Consul when we were outside, "he has been blowing up everything but the rock itself for weeks past."

It took the rest of that day to find the city engineer and then some time to locate his Spanish foreman. The latter produced the sticks from the cellar of a house that was being demolished. It didn't seem a very sensible place to keep dynamite. These sticks were entirely different from what we had previously used, maroon-colored and emaciated-looking. To repeated inquiry as to whether they were all right for submarine use—"*bueno in agua*" was my expression,—the foreman replied with rising redundancy "*Si, si, si, si, si, si*"—but alas, not one of them ever went off!

Then the next day the man who had charge of the fulminate caps was sought and found about two miles out of town over near the Spanish border. This seemed to be obeying with a vengeance the "don't" instructions to keep the caps and sticks well separated.

Getting the letter from the Spanish Consul wasn't so easy. I went there twice a day for three days and each time was told by the "chamberlain" that there had been nobody in who had authority

to sign the letter. For three days then, neither Consul-General, Consul or Vice-Consul had been near the place. On my sixth appearance the chamberlain seemed rather peeved. I felt that he was rather usurping my prerogative, and much as I hated to bother him again, decided to appeal to Mr. Sprague the next morning.

No sooner was the situation explained to him than the Consul called to his clerk to get a barouche, jammed his hat on his head, grabbed his stick, and off we went to the Spanish consulate, to find as usual—the chamberlain. For him I felt truly sorry during the ensuing ten minutes, and was rather glad that only a small portion of the remarks made by Mr. Sprague were intelligible to me. As it was, I got enough to gather that the U.S. Consul felt that the Spanish Consul-General's, the Spanish Consul's and the Spanish Vice-Consul's neglect of their duties was most unpatriotic, that the U.S. Consul considered that the laxity of the Spanish Consul-General, the Spanish Consul and the Spanish Vice-Consul was a distinct affront to the majesty of the U.S.A. that the U.S. Consul took the attitude of the Spanish Consul-General, the Spanish Consul and the Spanish Vice-Consul

as a positive incivility (I think was the word used) to the U.S. Consul in the abstract and to the Hon. R. L. Sprague in the concrete, that the U.S. Consul maintained that the Spanish Consul-General's, the Spanish Consul's and the Spanish Vice-Consul's failure to attend at once to the requirements of such a distinguished U.S. citizen as—(here he made a splendid flourish in the direction of where I cringed behind the desk)—as an absolute insult.

When the chamberlain got a chance to open his mouth, he endeavored to explain away in some fashion the protracted absence of the Spanish Consul-General, Spanish Consul and Spanish Vice-Consul from their place of business. The gist of his words seemed to be that the Vice-Consul had been having a sore thumb, but was coming in from Algeciras where he had been recuperating, on the 2.30 P.M. boat. The Consul waiting to hear no more, fairly ran out, I at his heels.

Back in the United States consulate, the clerk was given orders to accompany me to the boat to meet the Spanish Vice-Consul, and on no account to let go of him until he had got him to the Spanish consulate and the letter signed. We found the berry all right and were just leading him away,

bandaged thumb and all, when suddenly a red hot baby burst out of the crowd and threw herself on his manly chest regardless of his sore finger, and sobbed and slobbered all over him (she wasn't a bad looker either, though a little wide across the narrows). Of course after that we didn't have a chance—just had to release our hold.

We went back to the Spanish consulate, hoping the Vice-Consul might have the strength and courage to break away for a few minutes some time during the afternoon. What was our surprise to find that he had already been there, signed the letter and gone—his work for the week done.

It is to be regretted that a copy or translation of that letter is not available. The body of it was printed and looked like one of those invitation cards where you just write in the names, the occasion and the date. It was not addressed to the lighthouse keeper at Alboran, but was directed to all Spanish lighthouse keepers wherever exiled, and merely intimated that it was not absolutely imperative to shoot "J. Metcalf, *y su Amigos*" on sight as it was barely possible they might be quite harmless.

The *Wawaloam* finally got in on the afternoon of

the 2nd September, and we sailed out again on the following afternoon late, heading South 85° East true for Alboran Island, 117 miles distant, arriving off it on the afternoon of the 5th and found little more than a rock rising 66 feet above the sea and about one-third by one-sixth of a mile in dimension. From the sea it is impossible to tell that there is any vegetation whatever on the island, and indeed there is none above six inches high, a sort of coarse and prickly heather. We circumnavigated the island, finding that the main landing faced south-east, where there is quite a bit of a bay, but as the wind was from this quarter and was causing a rather heavy swell to roll in, it did not appear to be a propitious moment to try and land, so we circled on, and finally on the northwest end discovered through the glasses what appeared to be a small breakwater, and a partially protected cove. Gordon and myself made a landing in the dinghy without great difficulty, but as it was now practically sunset, there was no opportunity for doing any work that day and as there were many only slightly submerged rocks about, I stayed at the oars to keep the dinghy off, as it would have scraped badly alongside the breakwater if left unattended.

Two fairly hard looking men met Gordon on the breakwater and conducted him to the head keeper of the light, who was found at work on his lamp in the lighthouse tower, and on being presented with the letter, gave assurance of his good will and assistance and accompanied Gordon back to the jetty in order to express his respects to me.

Increasing to half a gale during the night, the wind kicked up such a sea as to make any attempt at landing next morning and the morning after that impossible, so that it was not until the afternoon of the third day that we finally dared make another try at getting ashore. This was abortive, however, as it was impossible to get near enough in to make any decent lee and when the dinghy was lowered a mile or so from the shore, it was found to be impossible to make any headway.

Previously the rigging had emitted only the ordinary steady whistle in a high wind, but during the overhaul in Marseilles something or other had been done, the result of which was to create a bar of notes in rising and inversely repeated descending cadence, with endless mournful repetition. During the three days that we rolled our hearts out standing off and on, it never ceased, and during the

nights particularly, brought back with dreary horror, the vision we had had on the first day of a bloated corpse floating by some little distance off, rolling face downward.

We finally effected a landing at the cove on the morning of the 8th of September, and were greeted by the head lighthouse keeper, who entered the dinghy, allowed us to land, and then moored the boat out of danger from the rocks, some little way out from the jetty.

When surrounding the island we had seen, sitting on the northern headland and flying about above, a number of sea birds which we took to be the lesser black-backed gull, so we set out in this direction, which indeed was practically the only direction, to try our luck. On our way the first bird that we saw was a dove-like one which flew very dodgingly like a swallow or swift. Unfortunately neither of us was ready with our gun and we did not get a shot. The gulls did not permit us to get very close to the point before rising and circling to one side or the other past us over the sea and well out of gun shot. Occasionally we would see a small thrush-like bird, which Gordon pronounced to be a wheatear, dodging in and out amongst the

heather, and when sufficiently away, rising in short flights. A flock of ringed plovers, also out of gun shot, passed.

Near to the point of the southern headland there are two wrought iron crosses and at their foot, two coffin-like boxes of marble, containing the bones of two former lighthouse keepers' wives. There was something unspeakably lonely in their position there high above the sea on the dreary, dismal, barren headland.

Not far from this spot is a hole perhaps 15 or 18 feet in diameter and 6 feet deep. At the bottom to one side there is a flat stone with an excavation beneath it, from which, some sixteen years back a British expedition extracted some buried treasure supposed to have been buried by Moorish corsairs a long while ago. Curious to know how this had been accomplished under the very windows of a Spanish government building, we questioned the lighthouse keeper; his sarcastic reply was that "*sometimes* the British know more than the Spanish."

Besides the birds already referred to, we saw a gray wagtail and a small warbler, of which latter one specimen was obtained.

Returning to the northern end of the island, we

visited the lighthouse and were refreshed with a gourd of rain water, a trifle brackish perhaps, but clear and cool, and the lighthouse keeper insisted upon opening up the bottle of cognac with which we had presented him on landing. But before doing so he delivered a short speech to the effect that he was of a race which delighted in honoring strangers who came amongst them and whose great joy lay not in receiving, but in giving presents so far as lay in their power, and indeed it was true that he had at first declined to take the bottle. His speech was practically a replica of that of Massenet of Dragonera.

The lighthouse crew consisted of this head man, who was a sufficiently villainous looking old rascal, of his son, an extraordinarily handsome, intelligent looking young chap of about eighteen, and the two other men whom we had seen upon the occasion of our first descent on the island, and one of whom in better daylight and closer inspection, proved to be about the second or third homeliest man alive.

As the lighthouse keepers' house had been designed as a permanent residence for the entire families of any four men who might be assigned

there, it was quite an imposing building, at least in its extent. Iron lattice grill work seems to be so essential a part of Spanish architecture, that even here on this desert island every window was protected by a cross work of iron bars set into the solid masonry. We were led into a fairly large room on the second floor and chairs for all hands set about. There was no other furniture in the room with the exception of a rather tall desk and a table. On the latter there was a ten-volume set of a work on natural history in Spanish. The cognac and water were brought, and a single glass. While the keeper was pouring out about three-quarters of a small tumbler full, I insinuated myself on his right hand, judging, fortunately correctly, that he would offer it to me first, partake of it himself and then pass it along to the left. This was what happened and by the time the glass had been around, I was heartily glad that I had been the first to partake. These feelings in the matter were primarily due to the fact that all hands had been smoking "roll your own cigarettes." The keeper loudly announced himself as a nonindulger ordinarily, but I noticed that he took an excellent pull at the raw spirits without its interfering with his flow of

conversation. The son did not indulge, the third man was apparently sincere in his statement, similar to the keeper's, as he took only a drop, but the homely man admitted that he did not drink, but in explanation added that the sole reason for his abstinence was because it was not included in the list of Spanish lighthouse rations.

The keeper claimed to have fought against the Americans in Cuba in 1898. He had a queer theory as to the derivation of the word "Yankee," insisting that it referred to the descendants of some Indian Chief, whose name, according to his pronunciation was as near to "Powhatan" as any Indian word with which I was acquainted.

Passing on to the realm of natural history, the keeper stated that they had all set us down as "naturalists" as soon as it was evident that we intended to land because, as he put it with brutal frankness "who else would be so foolish as to want to come here?" But he scouted, not without some emphasis, any claim on our part of being proper scientists—his idea of the species was apparently that such crept along on hands and knees, examined everything with a reading glass or microscope with the left hand, meanwhile taking down copious

notes with the right. Besides the work on natural history above alluded to, the keeper had a library containing many more on the same subject, besides probably a couple of hundred other volumes on general history, geography some few on medicine and a number of French, English and other dictionaries and phrase books.

As the keeper's draughts of the neat liquor increased in number and size, the conversation gained more and more the nature of a monologue, until it was finally impossible for anyone to get a word in edgewise. At the first indication of any intention on the part of one or the others of us opening the lips, he increased the speed and raised the key of his torrential flow of exuberant utterance. Since to me, not one word out of ten was intelligible, I soon made a quiet slip away, hoping to stalk a gull which I had seen from the window at the base of the cliff. For a long time after leaving the house I could hear the keeper running on in noisy interminability.

On my return to the house after a fruitless effort to get a gull, we were hospitably pressed to remain to lunch, the keeper apologizing for the paucity of the grub to be had, but assuring us that he would

be delighted to have Antonio, the homely man, go out to the yacht, if we would write a note instructing them to give him some meat. With the best tact of which we were capable we expressed our appreciation, but I explained that as my "*esposa*" was on board and expected our return there, it behooved us to arrive when expected. Learning of her presence, the keeper begged that we would bring the señora back with us in the afternoon, and with Castilian manner and sweeping bow that would have done credit to Don Quixote, assured us that "he would place the island at her feet!"

The suggestion of a photograph was made and all but the keeper evinced great enthusiasm. He treated the suggestion contemptously, intimating his opinion that the face of the homely man would break the camera, and that he emphatically refused to be photographed in such company. However, when solemly assured that prints would be forwarded, he assumed quite a different tone and indeed became so delighted at the prospect that he was almost forcibly detained from running off and shaving himself. The photographs taken, we announced our intended departure, but we were not to be allowed to leave without a reciprocal gift

from our host. This consisted of a few pieces of what might have been taken for six or eight by three or four inch patches of lightish brown leather. We were informed that they were the skins of squid —indeed the tentacles were still attached to some portions of them—and were highly esteemed as a delicacy. We had seen them hanging in the market at Gibraltar, but had not known what they were. Instructions were to toast them a bit and nibble at them as one might on toast during a meal. As a matter of fact our experience was that after they had been soaked in salt water for twenty-four hours in an effort to soften them to some extent, eventually fried and served up with a softening sauce, they were still absolutely unmasticatable. It would seem that the most the Spanish or anyone else could possibly do with the things would be to suck them.

Planning to return in the afternoon if possible, we started down for the boat. As we stood above the little cove looking straight down the 66 feet to the water, we saw a shoal of small fish and Gordon fired into their midst. To my great surprise, three were thus secured. I had not supposed that shot's penetration would be sufficient to do any damage

even though the fish were quite close to the surface.

With much expression of sincere good feeling on both sides, we rowed off, assuring our new acquaintances of our return in the afternoon if the weather was sufficiently propitious. We soon found, however, that the wind was more brisk and the sea had come up considerably in our absence, and as there seemed to be extremely little possibility of our securing any great number of specimens on this island, we swung the ship round and headed for Gibraltar Straits once more.

We got into the Straits on the evening of the 10th September, and were just in the narrowest part, when with little warning, a thick wall of fog blew over us from the southwest. One steamer going our way was all that was to be seen five minutes before, but five minutes later it seemed as if that neck of the woods was full of ships. Something boomed out ahead of us and somebody else screamed out behind us, and then there came a sound from the quarter that sounded like the *Berengaria* in distress, and then a little pipe like a tug's on the starboard beam. One after another they died down and when the fog left us half an hour later there was not a

ship's light to be seen. About dawn the fog came down again very thick, but we ran through the Straits safely and out of them the next day with a stiff northeast trade behind us.

CHAPTER NINE

Funchal—Preparations for the Desertas

REACHING Funchal, the lovely port of Madeira, late on a gorgeous afternoon, we were surrounded almost before the anchor chain had run out of the hawse eye by a flotilla of bum boats, piled so high with parrot and canary cages, monkeys, embroideries and wicker furniture, that it was remarkable that the boats did not capsize.

Bob Murphy had secured for us a letter of introduction from Col. R. Meinertzhagen to Mr. Charles B. Cossart of Messrs. Cossart, Gordon & Company, which firm we had been informed were the owners of the Desertas and from whom we hoped to obtain permission and perhaps coöperation for our visit to these islands. Great was our regret to learn the sad news that Mr. Cossart had died in June, 1924. Under the circumstances we were advised to apply to the late Mr. Cossart's brother, Colonel A. R. B. Cossart, who, a few months previously had re-

signed from the Service and come home from India to carry on the business, and to Colonel Cossart is due in great measure whatever success we had at the Desertas and later at the Salvage Islands.

Leaving the ladies to that pursuit of the feminine mind on landing at a new place—shopping—in this case of course for embroideries, Gordon and I proceeded in search of the Colonel. His offices were easily reached but were about to close, and Colonel Cossart had left for the day, so I left my note with a very polite Portuguese clerk and we retraced our steps down toward the water front.

The following morning we returned to call again on Colonel Cossart, and were immediately admitted to his private office. We were greeted by a lean, snappy, alert, keen man, obviously, almost impressively, an example of the best type of British Army officer. I endeavored to express a word of sympathy on the loss of Mr. Charles B. Cossart, which the Colonel gracefully acknowledged, and promptly proceeded to the purpose which had brought us. In most direct manner he went into the matter, suggesting that we would need to take with us two, three, or four men if we were to be successful in our quest. This was rather staggering

as I wondered where we could possibly stow this extra personnel. The Colonel explained that he personally had no proprietory interests in the Desertas, that this lay equally in the possession of Mrs. Charles B. Cossart and one Mr. Harry Hinton. He assured us that there would be no difficulty in obtaining Mrs. Cossart's permission for our visit to the islands and that no doubt he could arrange with Mr. Hinton as well. The latter he called on the wire and Mr. Hinton suggested that we come over and see him.

Mr. Harry Hinton is a splendid big specimen of manhood, slightly past middle age and with a most direct and breezy manner. He immediately signified his entire willingness for us to visit the Desertas and endeavor to secure such specimens as we desired, but startled us with a sudden inquiry as to whether we would like to get a seal. Of course this was what we really wanted more than anything else, was what in fact had brought us to this corner of the world. I replied rather hesitatingly in the affirmative provided he had no objections. Mr. Hinton smilingly answered that he had no objection whatever and asked whether we proposed swimming into the caves after them. Knowing at

the time nothing of the habits of the animal, this was rather a poser, but embarrassment was relieved by Mr. Hinton's immediately proceeding with an anecdote of his younger days.

"There were six of us," he said, "and we had been told that we must get into the cave before daylight. The night was perfectly black when we got to the mouth of the cave and each one of us taking hold of some part of the net, and absolutely stark naked, we started swimming in. We were all big men, your father was there Arthur, I remember—this was thirty years ago. We got into the cave all right, and one of the Portuguese went up on to the rock shelf and stirred up a big seal. He hit the net all right and he was in it for about twenty seconds, the next thing we knew we were all outside of the cave still holding on to the net, but the seal had gone and we were all damn glad of it!"

Back in his office Colonel Cossart indicated that he would be glad to accompany us if we would care for his assistance. Of course I immediately jumped at his suggestion, and it was so tentatively arranged that we should sail on the second day after.

That day we lunched at Reid's Hotel. We had been advised that a big bull seal was frequently seen not far from the hotel, but on the spot we could not get any confirmation of this. Afterwards we heard of this lone seal from so many other sources that we could not doubt of his at least occasional presence. It is quite likely that the conditions in the Desertas are so congested that an old bull might easily find life too hot for him amongst the more vigorous youngsters and seek peace on an open inhabited coast, even with the ever present danger from man.

To our great regret the Colonel announced on Saturday that business would make it impossible for him to get away with us on the morrow, but suggested that his nephew, who was very keen on the Desertas, would be glad to accompany us. We went down to the docks and selected a boat or *canoa*—pronounced kan-o-a,—you sort of sing it —and made arrangements for a net and such other gear as was necessary. Everything was on board and stowed away by about five o'clock or so, and the Colonel brought his nephew, the son of Mrs. Charles B. Cossart, a most engaging lad of about eighteen, on board for dinner.

Shortly after six-thirty on the following morning, young Noel Cossart and his cohorts—three Portuguese shore men and a pilot to help us stay off the rocks—came aboard, and we were soon under way.

A word about these men, since they are continually in the picture at the Desertas and play indeed no small part in the events there.

Antonio, the pilot man, captain of one of Colonel Cossart's tugs, was more than six feet in height, but stooped and thin to emaciation. A long, straggling, untidy black mustache appeared to be trying unsuccessfully to hide his yellow fang-like teeth. Pox marks further disfigured his sallow, sunken cheeks. But, as young Cossart expressed it "he knows the bottom side of every rock around the Desertas."

Perecha, who was promptly nicknamed Paresis, had a mop of blackish hair sprinkled with gray. When this was concealed beneath his wool skull-cap, with the ear tabs and soft spike on the middle of the top, his gray beard and lined and weather-beaten face made him look at least sixty—his real age was seventy-six!

Jose Vinaigre was by all odds the most intelligent

of the lot. He was rather undersized but very stocky, and we found, strong. His face was square, with a rather retrousse nose—he looked like a Scotsman or Irishman. Perhaps his outstanding peculiarity was his very "store," "plush" black fedora which he did not intend to lose, so he had it secured to a buttonhole by a line strong enough to hold a bulldog.

The name of the fourth man I cannot recall. There was nothing particularly noteworthy about him except that he was a marvelous climber, which of course was not a distinction in that assemblage, and the fourth ugliest man in the world.

While our good—if now somewhat foul bottomed ship plows off her four or five knots, let us glean what we can of these austere, barren massives.

CHAPTER TEN

Deserta Grande—The Ascent

"And there loom out of the blue, three sheer and clean cut mighty monuments of some great upheaval, purple-edged and fretted here and there with basalt red. The Desertas—how grand they stand in their desolation, their silence! Well named are they. They seem to be the silent sentinels of Time at their post in the Ocean of Eternity." ("Scamper to Madeira" and heading the article by Col. A. R. B. Cossart—"Cosh," in the *Badminton Magazine*, issue of February, 1911).

THE Desertas consist of a chain of three narrow islands, extending in a nearly north and south direction, the nearest point from Madeira lying about twenty miles south-east from Funchal. The northernmost island is Chao, about 335 feet high and extraordinarily flat on top. There is only one recognizedly possible ascent up its precipitous sides. Between this island and Deserta Grande is a channel not much over a quarter of a mile wide and dangerously full of rocks. The highest point on Deserta Grande is 1600 feet and the island is somewhat over six miles long and

at no point over a mile wide. There are only two accepted ascents, the one on the northwestern end called Castanheira being the easier, although the landing here is usually very difficult. Bugio, lying to the south and somewhat west of Deserta Grande is not so high, but even more precipitous. The ascent there is extremely difficult and dangerous; the Duke of the Abruzzi, that famous mountain climber, is said to have stated that it was the most dangerous piece of climbing that he had ever undertaken. During the past forty years an entire family has been wiped out in their attempt to reach the crest—grandfather, father and two sons.

It appears that "Years ago the islands were populated from the Portuguese colony of Madeira. At that period there was grass enough to feed a certain number of cattle and goats, and a small colony was formed. The people obtained most of their supplies from the mainland—that is to say, Madeira—but to this day there are marks bearing evidence of the fact that they also tilled the soil; even a chapel was built on a high prominence, and the cut stones still lie amongst the ruins.

"The colors of the rock formations are very vivid. The surface soil has long since been washed away,

probably by waterspouts falling on the island, although history does not relate how, and has left a crumbling mass of curious formations in which red and yellow colorings predominate. We pass by the ruins of a large corral (cattle kraal), the entrance to which is formed by two 12 feet high pinnacles of rock which Nature has conveniently set in place. This still goes by the name of the Portal das Vaccas."*

It was at Castanheira that we now sought to get ashore. But as we got near enough to make out the seas dashing high on the rocky coast, it was evident that this was to be no simple matter. After consultation with young Cossart, it was decided to have the launch tow the *canoa* in, in order that the men might reconnoiter and see whether it would be possible for us and our guns to be got ashore. The launch and boat away, we crept in a little closer with the ship and soon could plainly see the breaking of the waves on the large boulders and the swirl and rush as each receding wave curled back under the next. It did not seem possible that any boat could be got through with head kept

*Extracts from Col. Cossart's article in the *Badminton Magazine*, of February, 1911.

to the sea, but it was evident that the Portuguese intended to make the attempt. Gradually they backed their boat in, until the bow pointed so straight to heaven that it seemed as though she must turn completely over backward. Suddenly we saw the man Antonio stand upright naked in the stern and face the shore. For an instant the boat poised on the top of a wave—Antonio gave a magnificent leap and landed safely on a rock, which, for the second he poised there was dry, while the man left in the boat pulled off vigorously. The launch and the boat came back and Cossart held a somewhat lengthy parley with the Portuguese, which summarized into English was to the effect that we could undoubtedly get ashore right enough by swimming and taking care, but it might be very difficult to keep our guns dry. Deterred from the attempt more by the possibility of being marooned, foodless and waterless on a desert isle (in case of worse weather) than by mild perils of the swim, we decided to go on.

So the launch returned for Antonio and it was decided to go along to a spot about two thirds of the way down the western shore of the island, to Carga da Lapa. Here we anchored and found a

well protected little cove, where a landslide of volcanic ash had made an imitation beach—the only fifty yards on the entire coast of the three islands that is not either sheer cliff or great masses of boulders. The cliff above rises to one of the highest points of the island, and how I could ever so much as casually glance at that horrible rocky face and consider for one second attempting to ascend it, has been a matter of wonderment to me every day of my life since! Indeed I should have been warned by what young Cossart said when we decided to give up Castanheira—"We can go along down to Carga da Lapa and you can see how you like the looks of the ascent."

The Portuguese took their goods and chattels ashore and set up a rough camp. When this was done, the climb was commenced.

At first it was with reluctance that I yielded up even my gun to Paresis and took a stock with a spike in its stead, but it was with great joy and relief that ten minutes later I gave him my knapsack containing a camera and water. We had been told that the first part of the climb, which was along a very red, volcanic stone, was the worst, and so when after half an hour of passing from one

ledge just big enough to hold the toe of the foot to another of like dimensions, and holding against the cliffs with the finger tips, a change in the formation and color of the rock was noticeable, I breathed a sigh of relief and said to myself—"Ah, the worst is over." Had I but known! The only visible change was whereas the rock which we had up to this time traversed had been firm and hard to the hands and feet, that which we now encountered was utterly treacherous. Time and again I would set my foot on a projecting spot, or take hold of what seemed like solid masonry above my head, only to have "Paresis" scream at me; of course I knew very well what about, although I was unable to understand a single word of the tirade which such errors on my part always brought forth. At the end of another half hour, Gordon and Cossart being well ahead, I came upon a ledge a little larger than the rest which offered a possible place to sit down, without dangling one's feet over 500 feet of space. Sit down?—I sank down rather, sweat streaming from every pore of head and body, my knees weak as water and my head as dizzy as if I had been swung around by the feet for an hour. Then came over me the first real bitterness of the

knowledge of age—youth had forged ahead, leaving me puffing and blowing behind. To add to my wretchedness, I made the same unfortunate mistake which I had committed two or three times during the ascent—unconsciously and involuntarily I glanced downward, and then and there resolved to live and die a hermit where I sat. Finally on "Paresis's" lying assurance that the worst was now indeed over, I struggled to my feet and on and upward. He had said that we were now halfway up, and it certainly looked to be fully that, since as a matter of fact the summit could not be seen, so I decided that the chance of making the top and dying there in comparative comfort was worth the effort. Then as we toiled on, a brilliant inspiration came to me. If I lived to reach the top I would insist on going back along the top of the island and down to Castanheira. Inspired by this thought, I dragged myself on. But now the deceptive rock which crumbled under foot and broke off in the hand, gave way to a worse condition still. At least during the early part of the journey over the red rock, reasonable care and average surefootedness made it comparatively safe, and when aware of the crumbly rock Paresis's shouts warned

me, but this next and last section consisted of almost sand-like soil which covered the solid rock beneath. A foot might be planted in it, a firm hold for the stock having first been secured, and part of the weight rested on it, the other foot slowly brought forward to reach out for another firm hold—when stealthily, insidiously, the soil would begin to slip out from under the foot and only a quick spring backward prevent a horrible death on the rocks, now 1000 feet below! This, to me, seemed the very worst part of the climb. It was absolutely nerve racking to stamp and press the weight on a spot, trust it, and then have it deceive you. For two long hours there had been scarcely a spot where a slip or trip, where a moment's relaxation of infinite pains and caution would not have meant instant, horrible death, but all such things must end—if not in death, then in safety—and finally the summit was reached.*

*"The climb up the almost precipitous cliff is by no means one to be undertaken by anyone who is liable to be giddy, and the noise of the whirling sea birds adds to the difficulty of creeping up the crumbling cliff, which comes to pieces in your hands as you take hold of any projecting point by which to haul yourself up. Just as it so often happens in bad dreams

Beautiful Wrought Iron Gate, Alcudia -- Funeral Procfssion, Inca -- A Typical Street Scene in Palma, Majorca

Dragonera, Alboran—these had seemed dreary desolate wastes, but here on the top of Deserta Grande was Nature surely at her dreariest and most desolate. Great waves of giant boulders rising up, pinnacles of frozen lava beyond, great deep gulches like horrible scars running this way and that. Not a vestige of anything growing anywhere—desolation infinite—a marvelous setting for a Doré. But the appreciation of this came after. My first act was to drop flat on my back—regardless—on the rocky ground. My second, to take a long pull on the water bottle. My third, to enter a strong plea to young Cossart on the advisability of going to the north end and down to Castanheira. I pointed out that it was out of the question for me to attempt to descend by the way I had come up—the men themselves had said it was twice as bad going down and would result in my certain death—that indeed I had only come the last two-thirds of the way because I had not dared attempt to retrace my

—in the very worst part of the climb, one of the beaters had the bad taste to point out to us the grave of a poor fellow who fell over the cliff and was dashed to pieces 500 feet below." (Extract from *The Illustrated Sporting and Dramatic News*, dated June 18th, 1892.)

steps even over the distance I had at that time already come.

"But," said Cossart, "you didn't want to risk landing at Castanheira to-day and it might be much worse now, particularly after dark."

"Never mind," I replied, "I will drown if I must —I believe it is a comfortable way of dying, although I know of no one who can speak authoritatively—but it is better than going down that cliff dying by inches, only to be dashed to bits at one point or another."

My eloquence had won my point—Cossart turned to Vinaigre and questioned him in Portuguese. As I watched the expression of the man's face change, I knew that my fate was sealed—I was to die going down that hideous way up which I had so tortuously fought!

When Cossart had finished speaking, Vinaigre broke into a veritable cascade—though it did not last long—winding up with a long drawn nasal "*madre de dio*" Vinaigre took off his hat and crossed himself. That looked bad in itself.

Summarized, Vinaigre's remarks appear to have been:—"Where the young patron goes, Jose Vinaigre follows. If the young patron wishes to go

to Castanheira, Jose Vinaigre will show the way. Or, if the young patron requires, Jose Vinaigre will show the way to the senhor, the patron's friend. But the young patron should know that between this spot and Castanheira is a descent and then a climb again, each worse than this by which we have come—Jose Vinaigre awaits his young patron's commands—Mother have mercy."

Weeks after I learned that curiously enough the man had spoken the truth. I quote again from Colonel Cossart:—

> "In 1894 a landslip occurred on the Deserta Grande, and for about a mile on the southern side of the island, and nearly midway between its extremities, the cliffs are now so steep and crumbling that a passage is practically impossible. Goats do pass from end to end of the island, and so some of the men have done; but it means climbing down, traversing the landslip near the sea shore, with a dangerous climb up again. Since the landslip occurred it is necessary, if the southern part of the island is to be shot over, to move camp and go by

boat to the foot of Carga da Lapa Pass, whence two or three more days sport may be obtained."

"So if you don't mind," said Cossart very politely when he had finished translating—not in exactly the above words of course—"I think perhaps we had better go down the same way." "Certainly, quite," I answered, "and if you don't mind I will start now, in which case my remains may be partly gathered in before dark!"

But I did carry on for a way, scrambling over bunkers of frozen lava, down gullies, over ridges.

Presently I heard a shot from Cossart who was around a slight elevation. He had a close shot at a goat, but had paused to remove his sight guard which he had forgotten until he raised his gun and saw it, and by the time this was done the goat was just whisking around a corner. Right on top of Cossart's shot had sounded a shot from the little "game-getter" in the hands of Gordon. We followed the direction from which the shot had come, and when we joined up with Gordon he told us that the goat had come bounding around a rock directly at him. He had let the goat have the charge of No. 10 shot at about ten yards, at which

the animal leaped about eight feet in the air, and when he came down was going in the opposite direction, and going some!

Soon Paresis and I constituted ourselves an independent party, much as we had come up, to begin the descent. After our departure Cossart secured two goats, and these, with two young Bulwer's Petrel and a shearwater that the men had secured from nests, constituted our day's bag.

Although the Portuguese had, not without a note of despicable glee, characterized the descent as being worse than the ascent, they were either mendacious or mistaken, in so far as my experience was concerned. There was lacking the effort necessary to draw oneself up and the resultant frequent approach to exhaustion. Going down, was, it is true, harder on the knees, but as mine had been water for hours anyhow, it did not make much difference. Indeed the only worse thing about it was that as the face was more often turned outward from the cliff, it was more difficult to keep the eye from wandering to the depths below.

Before we started, Paresis—seventy-six years old this man, remember—gave me an exhibition of how it should be done, accompanied by a torrent of

words that were of course totally unintelligible but also by signs that were most comprehensible. And so all the way down, whenever we came to a particularly mean place, where a big space without holding ground—if I may so express it—must be traversed, Paresis would bid me pause and watch him. Seeking a firm hold for the spike of his stock some feet below, he would hurtle through the air, to land like a bird on a ledge sometimes just big enough for one foot, turn, and bid me do the same. To his intense disgust, my method of imitation was to sit down, lean back and slide, if it were possible to do so, using the heels of my hands and feet as brakes.

There were two occasions when I felt as though it was impossible to go on, and finding a place where one might partially relax, closed my eyes and turned away from the abyss. At these times Paresis crooked his arm over his stock, removed a small box from his pocket and imperturbably took snuff—his head thrown well back out over the precipice. He made me sick—literally and figuratively.

The worst came at the "red rock." Here we were perhaps only two or three hundred feet above the water—but perfectly sheer. The place remained

in my memory from coming up—but then I had been facing the other way and intent only on finding a finger and toe hold. There was a ledge, good firm footing and ample room. The ledge next below was smaller and farther in. What made the situation bad was that above our heads and between the ledges, a beetling arch made it impossible to leap to the lower edge—a matter of three or three and a half feet vertically—and land anywhere except on the outer six—possibly eight—inches. Below that—nothing but space! Paresis stuck his iron into the lower ledge within an inch or so of the edge and sailed, landing as does a gull on the water. Sticking his stock into an outlying pinnacle in such a way as to make a barrier in case I overtoppled, he called to me to jump. An agonizing moment of hesitation—but there was nothing else for it. I jumped, instinctively throwing my weight backward as I did so. The result was that as my feet struck I sat down, legs dangling over eternity, and Paresis's stick miles, miles above me.

As the weaker sister, I had been assigned Vinaigre as assistant to Paresis to get me down, but he had delayed to be of some sort of assistance to the others and only overtook us at this point. When

we arrived at the end of the cliff with only a dry torrent bed of boulders to be traversed to reach the beach, Paresis turned to me and said something to the effect that the señor was now safe, and looking down through the growing dusk I realized that indeed it was over, and so raising my right hand, with my last remnants of breath swore a mighty oath "Never again." But Paresis "got me wrong." He thought I was blessing him, and calling to Vinaigre who was behind me to do the same, he tore off his cap and crossed himself—so of course I had to cross myself too.

The others came down after dark! Youth was being served indeed. In his "notes" Gordon says that it was easier in the dark because you could not see the dangers so closely! Had it been I, dawn would have found me clinging to a ledge.

Yes, youth was served, but some time afterwards I found a little salve in the words of Colonel Cossart, (than whom I have never met a more nerveless man), who has made all the ascents of Deserta and of Bugio, too, many times.

"There are only three passes by which sportsmen, with camp kit, can reach the summit of the main island—Deserta Grande—and the

Castanheira offers the surest foothold. All the passes are steep and dangerous, and one,* I think, would make even the most intrepid Alpine climber hold his breath more than once, and . . . one has literally to hang on by one's hands and knees."

And the Colonel's words to me at a later date—"Bugio is much the worst, terribly dangerous" and then he went on to speak of the family which had been wiped out, adding "but I don't like Carga da Lapa one little bit either."

It was a relief to know the next morning that anyhow the old muscles were still good—just a touch of stiffness in the front of the thighs—rather less than the others had, I suspected.

Cossart and I took the launch and went south, standing close inshore looking for whatever luck might bring. We saw several terns but they were wild and only once came near enough to offer a shot. Cossart fired, but the angle was very difficult. As it was, I, never having seen a tern shot at, thought as did Cossart that the bird was hit. It certainly acted so; dropping, seeming indeed to fall down to within a few inches of the water, re-

**Carga da Lapa.*

covered, darting this way and that like a particularly speedy bat, and it kept this diving and gyrating up till well away from us. Perhaps it was a cleverly designed effort to make a poor mark; anyway every tern that I saw shot at after that (and not hit) behaved in precisely the same way.

We went almost to the end of the island before turning back. Not long after we had put about, Georges the Greek launchman had a fit. Dropping the tiller regardless, he leaped to his feet wildly gesticulating with both arms and jabbering away in alleged English. When Georges got excited his Greek would have been quite as intelligible to us as was his English. Finally he got control of himself sufficiently to point seaward, and just as we got around to look, there rose slowly, silently above the surface not seventy-five yards away, the sleek black head of a seal! Of course there was nothing for us to do but watch him "rise and dip" till out of sight.

Perhaps a quarter of a mile before we reached the ship we saw a gull sitting on a pinnacle of rock just where he was when we had passed before, not appearing to have moved a feather. While herring gulls were not exactly what we were after, we de-

cided to take this one if possible, in case the Museum people should find and be interested in any slight variations from the usual. Cossart dropped the bird as it sat, and it rolled down out of sight on the farther side of the rock. We returned to the ship, took the *canoa* in tow with Vinaigre and another Portuguese, and this Vinaigre showed that he as well as Antonio was no slouch when it came to landing on rock through a surf. Not only that, but this was solid rock, lava serrated into jagged edges, yet he climbed up around the pinnacle in his bare feet and came back with the gull.

Curiously enough, the stomach of this bird which we had almost scorned to shoot, became one of our most prized specimens, since it contained the body of a nearly if not quite fully grown Bulwer's Petrel, evidently only recently devoured, the feathers seeming to be still in the gull's throat. Thus the burning question "can gulls catch and devour Bulwer's Petrel" is answered and Colonel R. Meinertzhagen's doubts should be set at rest. The following is from his paper "Madeira in May":—

"The local herring gull is always on the look-out for a Bulwer's Petrel which is so rash as to

show itself near the shore in daylight. The gulls apparently soon overhaul and kill them. All our men were quite certain of this, and I am inclined to believe it, though we never saw such an incident. The men say that it is for that reason that no Bulwer's Petrel can either approach or leave the islands by daylight. This is all the more astonishing, as all those Bulwer's Petrel which we saw at sea by day seemed to be strong flyers and quite capable of eluding the clumsy gull."

Later that day I shot another gull from the poop of the ship—a young one—that was not more than about two and a half years old, as shown by his dirty gray coloring. The stomach of this bird also contained the remains of what had evidently been a Petrel, though in this case, digestion was well advanced.

CHAPTER ELEVEN

Seal Caves—The First Seal

THE Monachus monachus, Monachus albiventer, monk, or Mediterranean Seal is a hair-bearing species once common in the Mediterranean and indeed reliably reported as having been seen in the neighborhood of Palermo as recently as thirty-five years ago. It seems certain that Desertas is now its last refuge. The reason for this selection is not far to seek. Seals must of course lie up somewhere a large part of the time. Extermination faced Monachus if they continued to take their rest on exposed beaches.

As in all volcanic islands where rock of varying degrees of durability has been jumbled together in ages past, the water line of the Desertas is honeycombed with caves. But through some geographic cause which we will not pause to consider at the moment, there are here six caves—five on Deserta Grande and one on Bugio—the under land end of which terminate in smooth, bouldered

beaches. On these the seals may lie up in comparative security. Their numbers are too few to admit of their commercial exploitation—energetic and bold is the fisherman who will seek revenge for broken nets by pursuing them within the caves.

Estimates as to the number of seals comprising the colony vary considerably. The average judgment of those most familiar with the islands puts the total at about forty. As there are only these six caves where seals can "take the air," and as no evidence could be adduced that more than three seals ever occupied the same cave at the same time, and no cave contains more than three "beds" where the stones have been scooped out for greater comfort, this estimate does not seem over conservative.

On the day that we made our first attempt at "sealing" the wind was strong S.W. so that the tide being contrary, a jobbly sea was experienced in the strait between Deserta Grande and Bugio. As the launch was towing the dinghy and the Portuguese *canoa*, this did not help any. Fortunately cave No. 2* has a quite sizable natural breakwater on the southern side, so that when we cast

*For the location of these caves see chart.

off the boats and let go our anchor the sea was comparatively calm. With a silence truly remarkable on the part of these usually boisterously conversational men, the big seal net was gently lowered to the bottom from the boats, one on each side of the cave mouth.

Then Vinaigre stripped and disappeared swimming into the cave and soon began to emit unearthly yells to rout out any seals that might be lying up.

We had brought along my Mannlicher 6 mm. carbine, but as Cossart had deprecated any possibility of our getting a shot at a seal, it lay unloaded in the bottom of the launch. Whether Vinaigre had stirred up a seal which slipped under or by the net, or whether it just happened along, is uncertain, but suddenly, noiselessly, up came a head not over forty or fifty yards from us. Of course by the time the gun was loaded the seal had "sounded" and though putting in an appearance with no end of unconcern a couple of times more, presented a target for so short a time and at such an angle on each occasion as to make firing out of the question.

Going back to the ship was rather worse than the trip out had been. The wind had increased in force, indeed to such an extent that when we came

to round the southern part of Deserta we were for a while gravely concerned as to whether we were making any headway, held back as we were with the two boats in tow and frequently shipping water.

That night the wind increased to half gale force, the sea made up very considerably, and at three o'clock we hove up and steamed around Bugio.

One would have thought that the east side of Bugio would have offered some lee. Not at all—the wind and sea just seemed to run around the point, and only changing their direction, continue with unabated force. So we kept on going and finally hove to about halfway down the eastern side of Deserta.

Though we had been anticipating the arrival of Colonel Cossart, we rather looked for him to come in one of his tugs from the southward, thinking that looking for and not finding us at Carga da Lapa he would come through between Deserta and Bugio. As it was he came around Chao and as the weather was now quite dirty with frequent rain squalls, the tug was not made out until fairly close aboard.

The Colonel had with him three ladies of the Blandy household in Funchal and Mr. Henry Miles.

THE TAXIS OF MADEIRA

They had been landed a little way to the north in order to take breakfast which they had brought with them, since, due to the weather conditions, it was impossible to eat or indeed even to sit in the little tug with any degree of comfort.

They had now to be picked up again, and through the glasses we were spectators of some more of the splendid seamanship of the Portuguese boatmen as they cleverly backed their boat in through the surf. When the party arrived on board for lunch, only one of the ladies and Mr. Miles were found to have wet feet.

Noel Cossart was due to sail for home and school two days later, and the Colonel's trip had been largely for the purpose of taking him back to Funchal. We hated to have him leave. We knew we should greatly miss this likable, clean cut chap—a splendid example of the best type of young British manhood. He and all the visitors shoved off some time after luncheon, the Colonel promising to do his best to return in a few days.

That night we stood on and off and at daylight, the weather having greatly moderated, ran through the Deserta-Bugio strait and back to Carga da Lapa. Scarcely had we anchored when we saw the *canoa*

coming off, Antonio standing up in the boat and indulging in a violent pantomimic conversation—evidently unable to restrain his feelings until within earshot. But when he arrived in our midst he gave free vent to his lacerated feelings—oh, very!—vocally. Only a microscopic portion of his outburst was comprehensible, but the gestures were highly illuminative—until he began to stick Gordon violently in the ribs with his thumb. Some days afterwards we had this strenuous method of imparting information "translated" to us. Antonio was graphically describing his own sensations, experienced during two nights passed on the over-sized pebbles of Carga da Lapa beach. "Never again" it seems that Antonio was swearing as he strode up and down the deck, would he spend the night elsewhere than on board ship, as long as he continued in this present form of service. "*Aqui*, *aqui*, *aqui*," he stormed, each time directing his forefinger with great violence toward the hold.

The other men, more used to sleeping on rocks or anywhere else softer than the oak deck of a ship, which had been their lot the night they had spent aboard, appeared entirely unvexed.

On our first night at Carga da Lapa, Antonio

had found himself a cosy nest in the open 'tween-deck sail locker, when his piercing black eyes and villainous face had nearly scared me to death as I passed by on the way to the laboratory.

When, with the assistance of a "shot" and a packet of cigarettes we got Antonio quieted down a bit, we asked him why he had not done the same on the night that we had been compelled to put out. He was temporarily stumped, although when next we saw Colonel Cossart he had manufactured a gorgeous yarn to the effect that he had gone ashore to eat with his mates, and on rowing out later had hailed the ship in vain and finally gone around and crept up the anchor cable, only to be stopped at the hawse eye! Of course this was utterly false, as a man far less catlike in his activity than this rascal could easily have got on to the martingale and swarmed up over the bowsprit.

No little time was consumed in either acquainting Antonio with our plans or in getting him to accede to them—it was difficult to say which. Finally we got all hands and gear on board and got under way to go back east of Desertas again, this time around Chao.

In the last load to come aboard were over twenty young Bulwer's Petrel. They had been thrown regardless, still alive, into the bottom of the launch, and though we did not realize it at the time, they were in bad shape for specimens. The launch was not only dirty, but oily, and of course with gasoline in her bilges, and it is well known how far a little gasoline will go toward contaminating anything.

This collection, gathered by these goatlike men from the face of the cliff during our absence, put a big skinning job ahead of us, and we set to work without delay. The birds had been all brought below together in one big dip net, and as they were thus terribly bunched up and mussed, the first thing done was to spill them out on the laboratory floor. It was in one way a foolish move, as the creatures all proved themselves veritable Houdini's and for many days afterwards kept coming to light from every out-of-the-way part of the ship.

Applying the most humane method of slaughter, we pierced the brains of several of the birds with a needle. Of course the instant this was done they were quite dead so far as any sensation to pain was concerned, but the nervous reflex was very interest-

ing—we found it was quite impossible to get to work as the minute the body was touched with the point of the scalpel it was certain to perform some extraordinary gymnastic feat. So while Gordon applied the cyanide bottle to some of them, one by one, I constructed a sort of lethal chamber out of a biscuit tin, put in about six or eight of the remaining birds, put their beaks into a big piece of cotton thoroughly saturated with chloroform, and closed down the lid as tightly as possible.

Then while the ship made her leisurely way around Chao to anchor eastward of Desertas, we worked away at our skinning. When the first "cyanided" lot had been disposed of, the biscuit tin was opened. Of course all the dwellers therein should have been completely—decently dead—but they weren't. So soon as the lid was removed there was a bustling about, a general seeking for the outside—"a little more air please" might have been the cry—but these birds were dumb, not one ever uttered a peep. This was our first experience of the marvelous vitality of the petrel family—many times after we remarked the extraordinary hardihood of all the species encountered.

. . . . . .

The anchor was dropped almost directly off seal cave No. 1, known as and called on the chart "Furma da Lobos"—cave of the sea wolves, and in the afternoon we visited the cave. It is different from any of the others in that the mouth is very wide—too wide to permit of dropping a net, and at low tide the water is so shallow that just inside a man may wade—if the sea is sufficiently calm. This cave has probably the most extensive "beach" of any of the caves. When Vinaigre had returned from his scouting and reported emptiness, I slipped overboard, and with a box of matches and a candle held high overhead, followed him back in. Under the cliff side, about thirty yards from the water line—the tide was dead low—were two "beds" hollowed out amongst the stones—but of course no seals.

After this, taking in tow the dinghy and *canoa*, we cruised down the eastern side of the island. Several goats showed themselves on the cliff side and using the Mannlicher I made the most amazing number of close misses. It was easy to tell how near the shots came, as they would shatter little pieces off the rock. It was extraordinary that so many shots (I must have fired six or eight times),

could come so near yet never strike home. The distance must have been four or five hundred yards. The goats were almost incredibly senseless to their danger; indeed one couple followed slowly along the face of the cliff, at some points decreasing the range and staring stupidly at us, even when a bullet crashed against the rock right beside them.

A very large number of small sharks or dogfish lay at ease near the calm surface of the ocean, or darted about, their dorsal fins silently cutting the water.

Antonio had signified that he was taking us to a seal cave but we had no idea that we were going to cave No. 2 again, since it meant going practically the entire length of the island, and would have been nearer had we remained anchored at Carga da Lapa and come around the south end of the island.

When we had reached the vicinity of the cave, I silently signified my intention of going in in the boat, and with the Mannlicher and four shells, transferred myself to the *canoa* with Vinaigre and another Portuguese.

The boat was backed in noiselessly—no words were spoken save in a whisper. I never was able

to understand the necessity for such precaution, since inside these caves the incessant swishing and booming would drown any minor sounds.

This cave was quite small—that is, the outer portion—I never saw the far reaches of it. There was an arm that ran back under the rock, and into this black channel, Vinaigre, stripped and having first launched his club, disappeared swimming. While outside the sea had seemed calm enough, in here the surges crashed against the walls and leaped high above us to come seething down in a cascade of foam. Great care was necessary to prevent the boat from being swamped or stove in against the rocky wall.

One wave came along bigger than any before—a mighty sheet of water was hurled into the air and came down but a few inches from our gunwale. From out of this seething maelstrom appeared what in the dim light, bore to my distorted gaze the appearance of a penguin. In one and the same moment I was conscious of this supposed bird—that I had no idea that penguins were found in these latitudes—that the boatmen were hissing at me—that the creature was not a bird but a seal—that my rifle was not cocked—and that the seal

had disappeared. When he came up again about eight yards away I was ready—the boat rose on the top of a wave, quivering, so that the beast was almost another eight yards below me and sank as I fired. In that confined space the report of the rifle was truly deafening.

Three times more it came to the surface for perhaps three seconds, and each time from the lurching, bobbing boat I let go—misses all.

Finally the seal disappeared permanently, and to my relief (since I feared one of my shots might have ricocheted disastrously into the back of the cave), Vinaigre reappeared. We pulled him into the boat and it was probably fortunate that I was unable to understand the gist of his remarks to the boatmen.

Though I stood guard on the natural breakwater without the cave for a long time, no seal put in an appearance and eventually, very low in spirits, we returned to the ship, reaching her just as the short twilight ended.

. . . . . .

On the following morning, September 23rd, Gordon made an early start for Bugio and had most excellent luck, securing two young petrels (*Pterodroma mollis feæ*) alive, and killing four adult

specimens (not before represented in the American Museum of Natural History), also three terns, representing two subspecies, and one specimen of turnstone, a pretty little snipe.

To the disgust of the Portuguese (real or feigned), I shot along the shore—with no success—and so, according to Antonio, made useless any further attempt to try for seals in cave No. 1.

So I set out in the terrible dinghy with its still more awful oars, in an endeavor to sight and signal Colonel Cossart, as this was the day on which he had promised to try and come out, and would be expected to go on down the west side to Cara da Lapa looking for us, if he were not intercepted.

By this time we were jolly well fed up with the Portuguese. Our authority over them was but temporary, and this, combined with their inability or unwillingness to understand, made us doubly regretful that the Colonel failed to show up.

Antonio was subsequently wont to tell Colonel Cossart that he could understand everything that I said perfectly, but that *I* could not get *him*. This was manifestly a lie, because Antonio was a proud sort of a thing, and if he could have understood

one half of what I said to him, he would have undoubtedly hit me.

Happily the Colonel showed up on Friday, bringing along for luncheon a jolly party of about the same constituents as before, plus Lord, the United States Consul.

In the tug, towing the two boats—the launch to follow—we set off for our third visit to cave No. 2, with no intention of even attempting to secure a seal, at least so far as I was concerned. It was just by way of a pleasure jaunt to show the ladies the inside of a seal cave. So it was that having been initiated into the mysteries of this particular cave, I volunteered with Mr. Miles and Miss Williams to remain on the tug, when the others, sufficiently crowding the two boats, put off.

The boats disappeared into the cave and we lolled around the cockpit of the tug and fished.

The others were gone an unconscionably long time. But let Kay tell the story.

"When we had, in careful silence, entered the outer chamber of the cave, Colonel Cossart transferred into our dinghy everybody who was in his *canoa* except Vinaigre and himself. This put our boat down very low in the water, and great

caution was necessary to keep it near the middle of the cave to avoid the waves, which were continually thrown back after dashing against the surrounding walls.

"The *canoa* with the Colonel and the two men disappeared up a sort of narrow cove that ran straight back into the island. For a long time we waited there in complete silence hearing nothing from the other boat.

"After what seemed an age, indefinite noises were heard, followed in a few moments by the most heart-rending screams, exactly like a woman crying for help. Not long after, the Colonel's boat returned, towing the body of a seal."

We took the boats and the carcass in tow and started back for the ship. Soon the launch put in an appearance, we transferred the seal to tow behind the dinghy, the painter of which was passed to the launch, and we parted company, the tug with its party to return to Funchal around the south of Desertas, while Miles and Colonel Cossart came along for a visit with us.

To make sure that the towing line on the seal should not slip or foul, the Colonel elected to ride in the dinghy with Antonio. Sportsman that he

was, he had given no hint of a terrible blow on the head, received when the *canoa* had been crashed against the roof on the way into the inner cave. Without one word on the matter he rode for an hour and a half or more in that beastly dinghy, without taking his eyes off the seal, and it was only after our arrival at the ship long after dark, the seal parbuckled on board, that Miles told us that the Colonel had taken Aspirin and whisky and turned in the minute he had come aboard.

Bright and early the following morning the big job of skinning out the seal was begun, and in some phase or other occupied most of the day.

Our first interest was to take the measure of the huge carcass, which we found to be about 8 feet 7 inches. This seal proved to be an old male with the scars of many furious battles crisscrossing his skin in a manner that would have been the envy of any Heidelberg student.

The color was a dark mouse on top, but a mottled whitish-gray on the belly—hence one of this species' names, *Monachus albiventer*. Eyes were dark brown—ear a tiny orifice back of the eye.

The skinning was a bloody and horribly smelly job. True, the Portuguese did most of the work

and proved themselves no mean knife wielders, but our closest attention was almost constantly necessary, assisting and overseeing that so far as possible no slips should occur to mar the pelts. When we came to examine the stomach it appeared that the seal's last hunt for food had been unsuccessful, as there were no contents, except for a good number of horrible-looking worms about two inches long.

The carcass finally skinned out, Gordon and I devoted ourselves largely to the hide, on our knees scraping interminably at the fat which still clung to it, and wrestling at cleaning out the flippers. There are probably few more difficult skinning jobs than doing a seal's hind flipper. These labors we interspersed with rubbing dry salt into the inside surface of the hide, when we had got off all or most of the fat.

This treatment we repeated daily, until the skin was finally coopered up in a new wine barrel at Cossart & Gordon's place. Also on some questionable spots we used patches of waste soaked in carbolic, to the detriment of our fingers, which turned black, sometimes up to the middle joint, the tips hardening, then cracking, and becoming painfully tender.

CHAPTER TWELVE

Bugio—The Second Seal

CAVES four and five were the next to be visited. The sea was running quite high around the mouth of number five, which we visited first. Because of the rock-strewn nature of the locality, Colonel Cossart decided to use only one boat in getting the net set, and for this purpose, piled the net, three Portuguese, and himself into the ship's dinghy. At the oars of this boat was one of the *Wawaloam* sailors by the name of Lobb, and the expression on his face as the boat got in to where the water was broken and choppy, where sawlike ledges of rock stuck up all about, and the dinghy frequently shipped water, did not denote the acme of satisfaction—in fact the lad looked about half scared to death.

The entrance to this cave faces nearly south, that is to say, at almost right angles to the normal direction of the surge in ordinary weather, and in consequence the seas crash in, turn, and, thrown

back half meeting the next sea, create a most chaotic condition right at the mouth.

From the *canoa* I watched the half-swamped dinghy with grave concern and was indeed glad when the Colonel decided that it was impossible to do any work there and returned to the launch.

The launch picked up the dinghy's painter and started along for cave No. 4. A few score yards farther to the south there is a natural archway in the rock, and toward this Antonio now pulled our boat. I had long since given up any hope of conversing, or even of gaining the attention of the Portuguese, but as their intention of going through this archway became clear, I endeavored to expostulate, but vainly. They were far too much taken up with arguing amongst themselves to pay any attention to me. Vinaigre was in the bow and he kept fairly quiet, but Paresis, seated beside me in the stern, criticized in low-voiced volubility every stroke of the oars made by Antonio, particularly insisting, apparently, that the boat be kept nearer the middle of the passage. As we approached the rock the heavings of the surge increased, until, as we got fully into the tunnel-like arch, one great wave picked us up and shot us clear through to the

Feeding Peeps at an Early Age -- Peeps, Just before the End of His Short Life -- Mrs. Clews Painting a Shearwater's Foot -- Mrs. Metcalf and Miss Williams with "Cuthbert" and "Felix"

other side. As we dropped into the hollow, there, only inches away on the left, was a toothed, spiked rock as sharp as a spearhead. Had Antonio listened to Paresis, we would doubtless have been smashed to bits upon it. As may well be imagined, Antonio indulged to the full his opportunity for sarcastic comments.

At cave No. 4 the conditions were very much better than they had been at number five, and it was not a particularly difficult matter to set the net. When this had been arranged, the Colonel signaled to me to enter the çave and when we had slipped around one side of the net, Jose Vinaigre and I found ourselves swished around in three-quarter darkness. There were either two or three seals in the cave and it seems most likely that they saw the net, but I am not sure that this was certainly so. It is true that they could not be induced to try and come out, but on the other hand, this had also happened when I fired at a seal in cave No. 2 and in that case there was nothing to prevent its coming out, but it had seemed to prefer to stick around and take a chance. The seals in this cave would come up so close to the boat that I did not like to fire point blank with my re-

volver, lest I might "accidentally" hit one, this excursion being primarily to catch, rather than to kill.

Of course the firing of the .38 caliber revolver in such a place caused a perfectly terrible reverberation, and every time I fired, one of the seals would come out and bark in an annoyed tone. Once a seal came up so close to us as he rose to the surface that Vinaigre pulled out an oar and aimed a blow at it. Of course this let the boat swing around, and the next thing we knew we were over against and under the low side of the cave and in imminent danger of having our brains knocked out as the seas heaved in. I should hate to have been wrecked in that cave. It is doubtful whether we would both have got out, as the seals were distinctly, obviously irritated by us. These seals appeared rather small. In that light it was difficult to judge the length of their bodies, but their heads seemed not nearly so large as that of the other seal which we saw both in and out of the water.

Hard though we tried, we were unable to stampede the seals and we had finally to give up and come out of the cave.

As it was now getting on into the afternoon and

as we wanted to make another attempt to land at Castanheira and get to the top, the net was hove up and we returned to the ship.

Later in the day we did endeavor to effect a landing at Castanheira, and again were unsuccessful. By this time we were getting rather desperate at our failure to get ashore here and wanted to chance it, but Antonio, who only made it himself by swimming, would not hear of our trying. Along in the afternoon we were up-anchored and headed for Funchal, and early in the evening the myriad twinkling lights on the hillside welcomed us back to Madeira.

Weather conditions and other circumstances so interfered with our plans, that it was not until Sunday, the 26th September, that we again visited the Desertas.

Kay had set her mind on going "all the way" into a seal cave, so, the net in place, she and the Colonel went with Vinaigre into number four. Once they were well inside, the Portuguese began to give vent to the most blood-curdling sounds, intended to stampede any seals within. There were no seals to frighten, but the effect of the fearful racket, combined with the weird semi-

darkness and crashing surges, had quite a remarkable effect on Kay. When she came out of the cave she showed every promise of shaking right out of the old purple silk dressing gown of mine she had on over her bathing suit.

Then we went along to number three, now visited for the first time. This cave is right on the south end of Deserta and faces south. The *canoa* and dinghy were rowed in close to the cliff to reconnoiter and it was found that it would be impossible to hold the net with the seas running as they were. We therefore shifted about, and with Vinaigre doubled up amidships, another Portuguese at the oars, and the Colonel and I crouched in the stern, we cautiously backed into the cave. This cave has a secondary entrance, the archway of which even at low water leaves very little head room, and we were forced to curl down with our heads below the gunwale as the Portuguese, beautifully timing a wave, gave a last push on the oars to send us through with the gunwales scraping the roof. Inside there was some head room, but it was fairly close quarters at best and whenever we rose on the surge we had to be very wary of our heads.

At the head of the cave the stern of the boat

could be felt, rather than seen, grating on the rocks, and Vinaigre, stripped naked, slipped over the stern and stumbled up on the bouldered beach. I was next to go over the side and, my feet touching the bottom just as the water got up to my chin, I felt out ahead and bumped my knee on a rock, so I reached out and grabbed hold of this, just as something gave me a fearful swat between the shoulder blades. It was the keel of the boat coming down off a wave. The Colonel was close behind me and in fact passed me as we pulled ourselves upright amongst the boulders.

Everyone who has been out in a thunderstorm at night knows how the flashes of lightning will illuminate the surroundings for a fraction of a second, leaving a more impenetrable darkness than before. It was, in a somewhat lesser degree, like that in there—we could only see, when, for a moment, the sea fell away from the arch of the entrance. Keeping close to the wall we stumbled ahead for a few steps and then I lost contact and stood still. Reaching out to try and touch the Colonel I felt along the rocky wall for a couple of feet and all of a sudden my hand touched a seal! I pulled in so quickly that I nearly snapped my

wrist. Again I felt out cautiously, and again touched a seal. Of course I knew this time that it was only the Colonel's swimming trunks, but then it was too late—ten years had gone off my life.

We now tried to use our torches, but these, owing perhaps to their having got wet, were practically useless, though in the dim rays shot by one, we could see two enormous seals lying side by side with their backs partly turned toward us, grunting and twitching in their sleep. When we landed, our noses had told us they were there.

The Colonel had devised a bag with draw strings on it, the idea being that if we could get it over the head and front flippers of a small seal we would have him helpless, at least on land, but it was quite evident that these beasts were far too large to admit of any possibility of capture in such fashion. Vinaigre went back to get his club which he had left at the water's edge and as he returned to join us, the seals took fright and started for the water.

These seals' hind flippers are the principal organs of swimming. They are extended backward and are used as a fish uses its tail. They are not capable of bending at the knee or rather the knee is up in the body, and the animal has little facility for

motion on land. The movements of these lumbering creatures were most clumsy. They proceeded in a series of jerks, and they appeared to arch the vertebræ and straighten out, advancing somewhat after the manner of the inchworm.

From where the seals were lying to the water's edge was a distance of probably twenty yards, so that Vinaigre was able to get in several telling blows on what turned out to be the female of the pair, before it could get to the water. The Colonel followed on, trying to get in some cracks with his little iron billy, without having his own head knocked off by the backward swing of Vinaigre's club. I brought up the rear, laden down with the torches and the heavy bag which was weighted at the bottom with stones. Suddenly from the side of the cavern that we had not yet investigated wriggled a third seal, which passed between the Colonel and me.

It must be remembered that we had only occasional moments of light, so that it was not easy to determine with accuracy the size of the animals, but the impression I got of this last one was that it was comparatively small; so I stumbled along after it, trying to get the bag over its head and

yelling at Vinaigre that here was a "Chiquito." Probably it was as well that my efforts were unsuccessful, since Vinaigre and the Colonel were certain that this seal was a good big one and that I would have had the ride of my life had I succeeded in my intention. Just as the seal reached the water's edge, I stumbled on a rock and came down on my knees almost on top of the animal. The torches flew out of my hand, I dropped the bag and tried to get a grip around the "neck" of the tail, but I only succeeded in grabbing the end of one flipper and of course this was instantly pulled out of my hand.

The seal that had been hit was now lying, apparently dead, with its head and fore quarters just in the water, and Vinaigre had gone seeking the boat while the Colonel stood guard over the seal. Vinaigre presently returned with a line, and the seal chose this moment to come to life and began feebly struggling into the water. The Colonel raised the club and began pounding the creature's skull, while Vinaigre grabbed hold of its tail. I got a hold of the line, which was fearfully tangled, and, occupied in this, let a wave knock me down. I went on trying to unravel the line, while every

wave that came in washed Vinaigre and me about, bumping us together and rolling us about amongst the rocks, thus adding to the difficulties of straightening out the line. Just as I had succeeded in doing this and was trying to get a turn around the tail above Vinaigre's hold, the seal gave one last heave which must have been its death struggle, and disappeared into the water.

All this time Vinaigre had been yelling and screaming either prayers or curses, and those without must have thought we had got into a nest of sea serpents and were being crushed to death. For the cave was suddenly alive with naked, swimming Portuguese—not to mention the ship's carpenter, a Greek sailorman and Gordon. We all went swimming out, looking for all the world like a bunch of drowned rats.

The Colonel waited about for ten minutes and then said in Portuguese what was evidently the equivalent to "Come on, boys, let's go," and back into the cave they went. Georges, the launchman, was having one of his fits, which always indicated the presence of seals; so I swam over to the launch and we tried to follow up this seal, which I thought might possibly be the wounded one, as it was

swimming and diving about very erratically. We were soon convinced that it was the mate of the wounded one and was probably acting so strangely through its anxiety for its partner.

However, we did get some rather distant moving pictures and, returning nearer to the mouth of the cave, were greeted by the sight of the *canoa* coming out loaded to the water's edge with shouting men and surrounded by others swimming, towing the body of a seal.

Curiously enough, a seal, despite its great fat, sinks immediately after death and stays submerged for some time; so it was indeed good luck that one of the men, the priceless Vinaigre in fact, swimming and feeling about with his feet, should have found the body.

Advices from London in regard to the condition of the first skin were not very reassuring, so we resolved to take every precaution with this one; indeed we could scarcely wait to get back to the ship to begin skinning. No sooner was the carcass slung on board than the Portuguese set to work. What was our surprise, when the skin was being peeled off one of the teats, to see milk ooze out! When the womb was opened, there lay

a male baby, completely developed even to teeth and fimbria. The whitish patch on the belly was diamond shaped, very clear cut and almost perfectly rectangular. Our exultation over this interesting and important specimen was tinged with regret that we had not suspected its existence sooner, and by an immediate Cæsarian cutting possibly saved the little one alive.

The Portuguese were greatly amazed, as they had a theory that these seals only bred in the spring, whereas they apparently do so without regard to season, as do domesticated animals.

The mother's stomach revealed bones of four or five different kinds of fish. Of these, one at least must have been of very considerable size, as the backbone was nearly as large as adult human vertebræ.

The dimensions of the mother seal were rather less than the big male previously taken, the total length being seven feet eight inches. The over-all length of the baby was three feet.

Next day with a fresh trade on our port quarter we slipped out of Funchal, headed south for the Salvages.

CHAPTER THIRTEEN

Cyrano de Bugio, Alias Peeps

PRIMARILY he owed his survival to the weakness in every feminine heart for anything that is fluffy and helpless and produces an appealing sound. His beak, so out of proportion to his otherwise meager dimensions, gained for him the formal name. To those who began by being interested in him as a specimen and grew really to love him, he was always "Peeps."

On what precise date this little rascal stuck his funny nose through the restraining shell can never be definitely known. For our purposes his biography must start on 23rd September, 1926, when, his parents brutally slaughtered, he and a young cousin of about the same age, both faintly "peeping" were passed aboard in company with their defunct parents.

Beyond the fact that this was some species of petrel, we were ignorant. Padre Barotti, Curator of the Funchal Museum, called it *Oestrelata mollis*

and nearly died of envy, since his museum had no representative of it. Ornithologists in the Jardin des Plantes confirmed this classification, but Dr. Murphy refines this to *Pterodroma mollis feæ* (*Salvadori*). Under any circumstances the skins were the first representatives of their species to be brought to the American Museum of Natural History, and Cyrano probably was the first ever to be taken alive.

Very many years ago during a religious persecution some nuns fled from Funchal into the interior of Madeira and sought hiding in what consequently became known as Curral des Freilas—corral or plateau of the nuns. As the vicinity of this spot is the only locality where these birds are known to exist on the island, the Portuguese have called them "freilas."

Besides Madeira's one, it would appear that there are only a few other spots in the world where this rare bird nests: the island of Bugio and one or two islands of the Cape Verde group.

Combined with the feminine passion for pity in prolonging "Peep's" life was the fact that a lot of skinning awaited our inexperienced hands, so Cyrano and his little cousin joined the seven or eight

mute Bulwer's Petrel still alive, suffering a forced feeding and awaiting the moment when opportunity would render him but a specimen.

Bulwer's Petrel died on the average of one a day. One who had been christened Felix was the last to survive. He might have achieved a ripe old age but for his wandering proclivities and insatiable curiosity. One night when we were busy at the bench in the laboratory, Kay came in and turned Felix loose for a little constitutional. He promptly came around to investigate our operations. Intent on our skinning we failed to note his too close proximity to the edge and our attention was only called by a splash. There was a bucket of formaldehyde solution sitting on the deck and Felix had flopped plump into it. Now for a man to approach his head to a bucket of formaldehyde solution means tears in the eyes and usually a fit of coughing. We always tried to be careful not to get our hands in it. Felix's immersion lasted but a moment, and on release from his unintentional bath, he exerted the most strenuous efforts to rid himself of the solution; he lived that night and the next day, so perhaps his efforts were more successful than would seem possible.

Only was left now Cyrano—his cousin, amazingly surviving all of Bulwer's Petrel far more advanced than himself, had died quietly the night following Felix's demise.

Evidently it was impossible to raise petrel in captivity just as Bob Murphy and every one since, had said. Forced feeding seemed not to nourish them at all, and nothing could induce them to accept food voluntarily.

A little ball of marabou, Cyrano was daily, almost hourly, getting noticeably thinner and weaker. A conference was held—a decision reached —he should be chloroformed on the morrow—in common humanity.

As by way of farewell, Kay picked the poor emaciated little thing up in the cup of her hands and pressed it gently against her cheek. The feeble scrawny neck stretched out, the bill pecked along Kay's cheek, found the lips, pinched them once or twice and took hold of the tongue. Apparently he liked the saliva. "I believe I could get him to eat that way," said Kay, so orders for extermination were canceled and from that day the bird was as a child to us.

For weeks he would eat only when Kay, having

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thoroughly masticated small portions of raw fish, inserted the ever elongating bill between her lips. But by degrees he began to feed from the fingers, though it was always necessary to run the fish, thoroughly chewed, in through the side of the bill —the end of which seemed quite useless. And let no one suppose that raw fish can be chewed four or five times a day for months, without the constitution becoming impaired—not to mention the wear and tear on the disposition.

Though slow to accept any method of presenting food, other than via the tongue and lips, he was quick to recognize Kay as his foster mother. It was not long before he was strong enough to walk and though his rolling gait was most comically ungainly, he could make remarkable progress. His territory was the bunk in the room where Kay dressed, and as she went back and forth, "Peeps" would try and follow up and down the bunk "peeping" for his mush of fish and saliva.

His cutest moments were in the morning. For a long while of course we despaired of finding him alive and always rushed in to look the first thing on awakening. He was just a bunch of gray down, and when sleeping with head under wing,

it was utterly impossible to distinguish one end from the other. When he was gently prodded with a finger his head would come into view, the beak usually spreading in the most extraordinarily expansive yawn. Later on, if we put a hand, palm up, beside him, he would run his beak all over the fingers apparently seeking tongue and lips—and food. Not finding this, he would begin to bite—not peck like any other bird, but actually take hold of the fingers—in the meantime making a most plaintive sound, a sort of purring moan. It was not a loud noise, though it usually was followed by very imperative "peeps." It had no beginning and no ending—it was most pleading and appealing.

Different emotions were expressed largely through variety of intonation of "peeps" and we quickly learned to distinguish these and to know whether the bird was hungry or annoyed or content. Unlike a human baby, he was never unnecessarily noisy. If he wanted food, or you accidentally pulled his feathers or waked him suddenly, he would let you know about it for a minute or two, but with rare exceptions he did not yell for the sake of yelling.

When unusually irritated, as for example, when

moved to a more convenient position while being fed, he would go "phut, phut" exactly like an indignant little old man.

Though never learning to feed himself, he got to be keenly conscious of the approach of food, which he would welcome with a single cheerful "peep" reiterated. If not promptly fed, he would reduplicate with "peep, peep"—a rising inflection on the second "peep." But if his meal was unduly interrupted, or food exhausted before his appetite was satisfied, he would "triple it" with an intense shrill emphasis on the third "peep."

Remarkable indeed was "Peeps's" intelligent appreciation of anything being done for him. If an eye became clogged with anything, such as his own fluff going adrift, or if in the morning his nostrils and bill were caked with mucous from cold in the head, it was only necessary to approach him gently and quietly, to have him remain absolutely immobile while the obstruction was removed. Unfortunately this quiescence did not extend to his feathers. It seemed impossible to do any cleaning work on them without hurting him, and he would grab a finger or go "phut phutting" down the bunk.

We soon found that he loved above anything else

being stroked under the chin. He might be shouting mad, but it was only necessary to pass a finger gently along his beak and the side of his head to have him subside at once, and with closed eyes, lay his head over to one side in a very ecstasy.

All went well so long as the climate was mild, but on the little fruit freighter *San Andres* that bore us from Las Palmas to Dieppe (nearly nine days), as the weather got colder poor "Peeps" developed pleurisy. Though we had "kissed him good-by," we hedged him about with warm things, and putting him in the upper berth with the curtains carefully drawn, ourselves shared the lower bunk—about eighteen inches wide. Our happiness was scarcely greater than our surprise when we found him alive in the morning. So, though he had a bark like a Great Dane, he survived to reach France. When at an ungodly hour of a bitter morning he was placed in a cotton wadding-lined basket for the trip to Paris, he protested violently for a quarter of an hour, but eventually subsided and uttered no sound until the metropolis was reached.

When removed from the basket and placed in a box at the hotel, he immediately began to shake his head violently and kept this up intermittently

for about a quarter of an hour, each time sending a small spray of water about. Very likely getting rid of this saved his life. He continued to mend while in Paris, though he had other attacks of pneumonia or pleurisy.

The Channel crossing was too much for him—for the first and only time in his voracious life since we had learned how to feed him, he refused absolutely to eat and we again despaired of his life.

Arriving in London he rallied and took nourishment in his old violent fashion. But there came that famous fog of November 26th, when the air was so thick in the rooms, with the windows closed and curtains carefully drawn, that it seemed the hotel must be on fire.

We came home after the theater to find the poor little chap fighting for life, unable to breathe through his nose, his extraordinary beak opening and closing gaspingly. Kay gave him whisky and water. To this he had still vitality enough left to resent vigorously. Then we sat down to await the end. We knew he could not last till the morn—but he did. About two o'clock he had a violent spasm, scattering water and dust around, and from then on began to breathe more easily.

By the time the evening trip to Southampton came along, Cyrano evidently had become a seasoned traveler. He opposed strenuously the idea of entering his basket, but once inside, preserved complete silence till on board the ship.

"You cannot feed and so you cannot keep alive a petrel in captivity."

This was the substance of the unanimous verdict of all the worth-while opinions we had had.

So we could not but experience elation, when, on landing in New York on the bitter cold evening of December 7th, 1926, "Peeps" was still in our midst. We felt like crying aloud: "They said it couldn't be done, but we have with us a most rare species of petrel taken from a semitropical island and brought in a basket over nine thousand miles of wintry seas, reared to his present advanced age of two months and twelve days by hand and lip—permit us to present to you, ladies and gentlemen,

Cyrano de Bugio

Voyageur Extraordinaire."

. . . . . .

From the first touch of cold on the *San Andres* we realized that herein lay the greatest danger to "Peeps" and this fear was further confirmed each

time the thermometer took an unusual drop. Nor did it seem to matter that every precaution was used to keep the temperature of the room even, and extra protections were placed around the box in which the bird was kept. For a day before landing in this country, and for a day after, "Peeps" refused to eat a particle.

Up to this time he had invariably refused, with an emphasis which left no doubt as to his accuracy of taste, any food but fish—mackerel for preference. Oysters he would accept temporarily—and promptly reject.

When for two days the most temptingly masticated morsels of several kinds of fish had been consistently refused, Dr. Crandall of the Bronx Zoo was consulted.

"Chop beef finely, scald it, and soak it in cod liver oil" was his verdict. Marvel of marvels, "Peeps" ate! After a while fish similarly soaked. Then he had to have his saliva again. Finally that palled and we had to use *both* oil and saliva. It would be hard to describe how appetizing it is to chew up little pieces of fish saturated in cod liver oil. And every time we had a cold wave, Cyrano went on a hunger strike, even if his room varied not a degree.

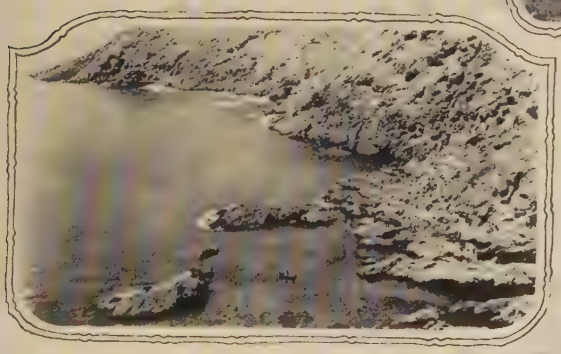
Up to this time "Peeps" had grown somewhat, but in plumage had changed very little. If anything, he was more a ball of marabou than ever. Indeed there was such a mass of it that he was always stepping on it and falling on his beak. Then he would say "phut, phut" and push on. A big box to fit the double bed in the guest room was made for him and various linings used in an effort to assist walking and cleanliness.

Shortly after reaching this country the wing and tail feathers, which up to this had been barely visible under the down, began to develop remarkably and the down to shed.

(From December 15th, 1926, to January 10th, 1927, a journal was kept. The following is a condensation of these entries.)

December 15.

There is no question but that the bird recognizes us. He will answer to a high falsetto "peep" and after this has been repeated and he has answered to it several times, if the call is changed to "peep, peep" he will, in most cases, change his reply to the same.



SALVAGE GRANDE -- SEA LION AND YOUNG IN STONE. GREAT PITON -- THE LANDING PLACE, SALVAGE -- GREAT PITON AT LOW TIDE, THE "WAWALOAM" IN THE DISTANCE

December 17.

Seems to work best to use salt water, saliva and cod liver oil more or less in rotation with his food, though care must be taken in using raw meat as this seems to have a very loosening effect.

The down first came off the main joints of the wings, then the upper part of the back, leaving, as it is to-day, the head still thoroughly covered with down and most of the rear part of the back and under part of the body.

December 20.

We have been unable really to keep the bird clear of a cold in the head since before reaching Dieppe, and as the condition seems to vary very much with the weather here, much care is used in an effort to keep the temperature even. When the mucous conditions have become worse, it is occasionally found beneficial to dip a hot spoon into a little dish of Omega Oil, the resultant fumes helping to clear the cold.

December 23.

It cannot be stated absolutely, but it is the

impression that the inner eyelid moves laterally.*

December 26.

Recently the bird has become much more capable of biting and can now give a good hard pinch to the finger when seized in his beak, and he will in the morning, if hungry, when the fingers are laid in front of him, bite them one after the other. This appears to be a development of the way he had of just feeling around with his beak and making a little moaning noise. This noise he does not make any more.

December 30.

Underneath the bird on the bottom of his box we have a light sheet of canvas covered with toweling. It would be extremely interesting to know why he pulls up the toweling in the corner and then tries to get the canvas back also. He will work at this industriously for a long time.

*These birds have double sets of eyelids to accommodate them according to the amount of light.

January 3.

After almost total fasting for two days, is eating well again.

January 4.

Ate little during the day but at midnight accepted a fair meal. As room was a little cold, held him between pajamas and body till daylight.

January 5.

Took a small amount of food twice during the day and at 6:30 ate a good meal, also a fair amount at 11:30 although on the last occasion only took a few mouthfuls until cod liver oil was used.

Seems as if night is the best time for feeding. Could this possibly be accounted for by the habits of the parent birds in hunting during the day and feeding the young at night?

Wings continue to expand rapidly and down to come off, with the exception of head and lower sides of breast. Notice that at these latter tufts he seems to pull frequently. Im-

possible to know of course whether this is natural or caused by slow shedding due to captivity and climate.

January 10.

Becoming increasingly temperamental in regard to taking food. To-night, for instance, refused again and again, waddling halfway across the bed to escape being annoyed, but when Kay stuck her head in at the door and "peeped" at him, he immediately came pattering across to be served. After eating a short while right heartily, he lost interest again and started off on an exploration trip of the bed.

While "Peeps's" appetite was certainly not what it had been in the old days, when we only stopped feeding him lest he gorge himself and when he always called for more, we had become so convinced of his fundamental vitality that we finally reconciled ourselves to his uncertain eating and on January 13th, left on a frequently postponed visit.

Following are extracts from Miss Williams' letters to us during the ensuing five days:—

January 15.

"'Peeps' behaved very naughtily all yesterday, refusing to eat. I tried him at two o'clock, but without success, then again at four, and finally decided to come in on my way to the Museum and try again. This visit brought the same result, so I called again on my way back from the Museum at eleven o'clock. I tried him with both fish and meat, but although he let me put it into his mouth, he generally managed to spit it out again."

January 16.

"Am glad to say that he is more reasonable this morning and he had quite a good meal of meat chewed up. The saliva certainly appears to make it more appetizing to him. I am hoping he will continue to eat, for it worries me so when he doesn't. Catherine is going to get one or two oysters to tickle his palate. Don't be surprised if you find he can fly, on your return, for he made a very good attempt last night, and nearly succeeded in getting over the corner of the box."

January 17.

[Telegram.]

"'Peeps' still eating poorly Crandall consulted."

January 17th

"With regards to 'Peeps.' I am sorry to say that he is still eating very little and then only by persuasion. I was worried about him this morning and tried to get hold of Mr. Crandall, but it was not until twelve that I succeeded. It was impossible for him to come over, but he sent one of his men, to whom I explained the situation. This man, Stacey, was satisfied that our treatment all along has been everything that could be desired, but advised a change in fish to flounder or sole, and Catherine has gone out to get a little. He is going to send us some special worms to try and tempt 'Peeps,' and told me of some oil to keep his eyes free of mucous. Catherine and I managed between us to get him to eat some meat and followed this up with a few drops of cod liver oil. I think perhaps he has a cold and will recover in a day or two, but will keep you advised. I will try

him again when Catherine comes in and will return after dinner.

January 18.

Telegram.

"Regret 'Peeps' died midnight please wire instructions."

CHAPTER FOURTEEN

The Salvages

OF volcanic origin, the little group of islands known as the Salvages (Eng. "Savage") lies about one hundred and fifty-six miles nearly south of Madeira and consists of Salvage, Great and Little Pitons and about a thousand rocks and pinnacles at high water; when the tide is out there must be about a million. Our charts advised us that the survey for it was made by H.M.S. *Argonaut* in 1915. If it was a good survey when made, there must have been some extraordinary changes in twelve years. This is probably the case, since older records call Great Piton the largest of the islands, and subsequent mention gives it a greatest dimension of two and a half miles, whereas it is now possibly a mile over all.

Portuguese fishermen collecting young shearwater are the only regular visitors. In all the boats of these people we had observed, no woman had ever been seen. In 1889 a treasure hunt had visited

Great Piton, in 1895 a scientific expedition made a considerable stay. In 1915 came the survey of the *Argonaut* and in 1923 Shackleton's last expedition made a stop. None of these carried any females of the species, so that when, on October 2nd, 1926, we had come to anchor south of Salvage and with the launch reconnoitered for a landing in what the chart called Cagarras Cove, we were able to greet Kay, when she leaped nimbly on to a conveniently placed flat rock, as probably the first woman visitor.

The steep rocky side of the bold head around which we had just sailed, now faced us, and we proceeded to climb this, sometimes using an indistinct, tortuous path, covered with small, sharp, broken rock, but most of the time ignoring this, preferring to take a more direct, if more arduous course.

We had climbed about halfway to the summit, which is here perhaps three hundred and fifty feet high at this point, when suddenly the most startling sound came from somewhere close to us. It partook in some measure of the nature of the honk of a goose, the bray of a donkey, the bark of a dog, and the hiss of a snake. Whatever was producing the amazing medley of sound was obviously deeply

resentful of our presence. Searching about we soon located the author of this unseemly noise, a three-quarter grown shearwater in a most comfortable looking cranny in the rocks. When we approached it the singular cry was repeated with greater intensity and when a gun barrel was inserted, the bird became perfectly wild with rage, attacked the gun with greatest fury, and at both the inhaling and exhaling of each breath, emitted the most raucous staccato screams.

This was our first encounter with the young of the *Puffinus kuhlii borealis*. We had many encounters with them and found them universally aggressive and courageous to the last degree. In this regard, there seemed to be little difference based on age. A young bird with all its down still in place, no wings to speak of, and not yet able to more than stagger, fought as madly and screamed as vindictively as an almost completely developed one.

On the top, the island presents a really pretty topographical layout. To the northwest, Burt Peak and to the northeast Tornozellos Hill rise in gentle undulations to 515 and 450 feet above sea level. Between them lies something of a depression, through which runs an old dry watercourse.

Farther to the north lies a perfectly flat table land ending in cliffs, from which the drop is over four hundred feet straight to the green sea. The island might be roughly a scant seven miles in circumference. Its general outline is fairly circular.

There is little flora on the island. We observed but four varieties. One was a rather palish-green pliable bush or rather small tree,* which grew to a maximum height of eight or nine feet. It was only to be found in the lower spots—mostly along the old watercourse. The leaf was rather large and about the same color as the rest of the tree. The flowers were yellow and tubular—quite pretty—hanging in sizable clusters. For some time we were puzzled as to how these flowers were pollinated, not remarking any polliniferous insects. But later, Gordon observed on two occasions a green humming bird hawk moth. So perhaps therein lay the answer.

There was also the ice plant (*Mesembrianthemum crystallinum*) a shrub about a foot or so high, which with a pretty white waxy flower, looked somewhat like a dwarf juniper. But the most prevalent plant was a scrub which covered most of the ground

*Probably *Phelipæ lutea.*

not too rocky to defy a root hold. This lay quite close to the ground and intertwined in most places to form a dry carpet. Beneath this lay a labyrinth of burrows, perhaps of rabbits, perhaps of the white breasted petrel (*Pelagodroma marina*). We did not see anything of these, but this may have been because their breeding season was over and they had left.

Of whatever fauna these burrows were the domiciles, they made walking on a considerable portion of the island uncomfortable. Knees and ankles were constantly in danger on this treacherous ground, which would suddenly give way to a depth of six to ten inches.

Heading northward, we soon came to a long "L" shaped stone wall, which presented a temporarily puzzling problem. Could it be the remains of some barrier or fence dating from an epoch when, possibly, as in the case of Deserta, this island had been inhabited? As this question was being considered and discussed, a snorting bray arose. Further investigation showed that along the base of the wall holes had been left at frequent intervals, and in each was, or had been, a young shearwater. Other haphazardly placed walls showed the same con-

struction and determined the cause for their erection.

During the Spring visit of the Portuguese they are said to slaughter upward of twenty thousand of these nestlings. The carcasses, skinned and cleaned of the oily fat, are esteemed a delicacy. The fat makes an excellent oil for several uses; the down is of a fine quality; consequently there are three products from the same bird in good demand and readily marketable in Madeira and the Canaries.

The height of the breeding season is in June and it seemed strange to find these young birds as late as October. This may perhaps be accounted for by the very slow adolescence of the species, but we wondered whether it might be a secondary breeding.

In getting the birds out of the holes care had to be exercised to avoid the wicked, two-inch long beaks. It was soon found that the most tenacious individual would grab a stick and refuse to let go, permitting themselves, struggling and screaming violently, to be dragged out rather than release their grip.

In order to find out without jeopardizing our own epidermis whether their bite was really as bad as their bark, two of these birds were sicked on

each other. Raising their voices to an even shriller key they ignored us and advanced against each other in clumsy, stumbling fashion, balancing themselves on their only partially developed wing tips. Within reach of each other they aimed several wicked, but not particularly accurate or damaging blows, then coming to close quarters, engaged in what promised to be a death grip. Their beaks interlocked, each endeavored without losing its purchase, to reach the other's eye. All the time they kept up a positively ear-splitting din. It was decided after a little that they were pretty good berserks and somebody made some inappropriate remark about the S.P.C.A. so the birds were put back in their holes, all optics in fair condition.

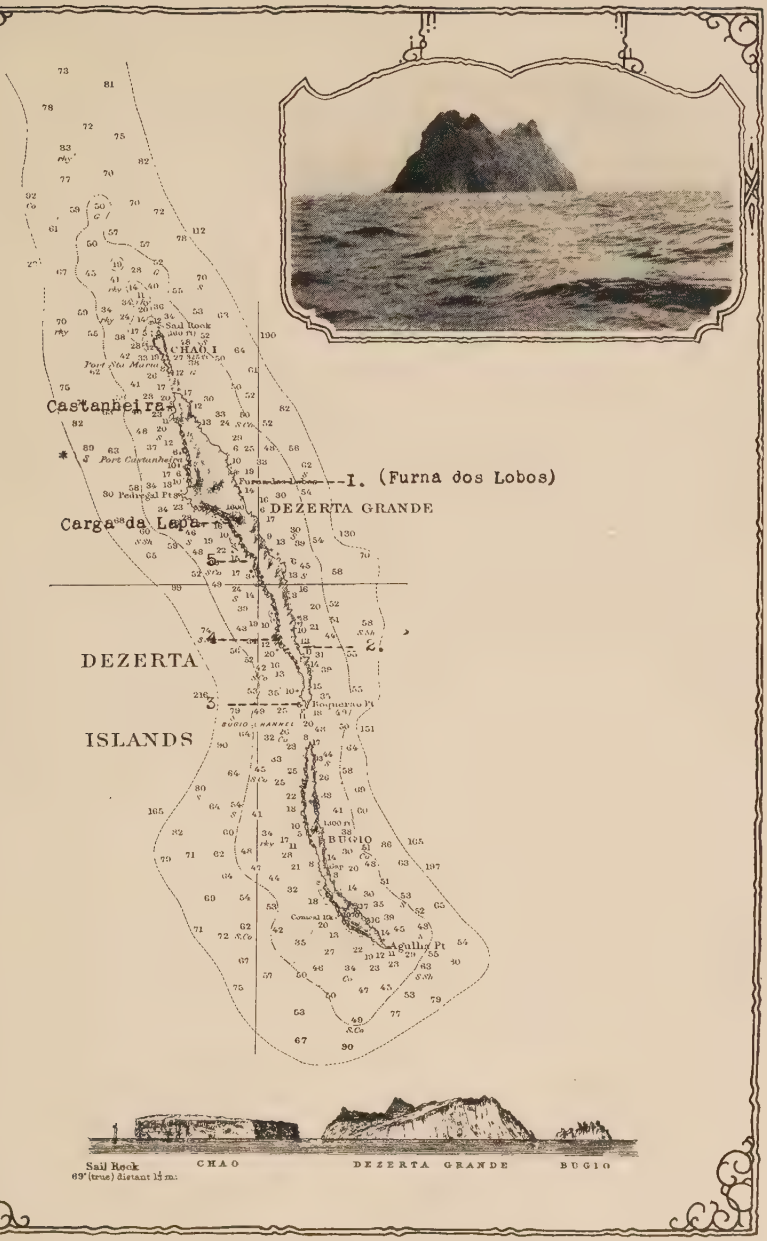
About dusk that evening way down on the *Wawaloam* we heard the most awful racket imaginable. Somehow I got the idea that we must have got those birds mixed and put them back in each other's nest. If such was the case it was a pity they weren't kept for specimens.

Some little way along the dry bottom up which we now passed, we came to a stone and mud hut with a corrugated metal roof, no doubt erected by bird hunters. On the ceiling, that is, the underside

of the roof, some one had written in lead pencil, approximately this, "*Quest Expedition—E. Shackleton, April, 1923.*" Unfortunately we put no stock in this as we could not see what Shackleton's last expedition would have been doing there. So we made no written note of the exact wording, and too many months have passed for memory to serve accurately. Later we learned that in point of fact the expedition had stopped there to collect the little tomatoes as an antiscorbutic addition to their stores. Curiously we did not see any indication of these tomato plants, or at least if we saw them were too ignorant botanically to recognize them.

Incongruously enough, at the moment the only occupant of the hut with the iron roof, built by those who had slaughtered so many of his relatives, was a young shearwater. He was utterly unprotected against anything—except the elements—just squatting in the corner, and when we entered, engaged in an investigation under the left wing. But despite his evident great surprise when given a gentle poke, he immediately reared up with defiant scream and wide open beak, even advancing aggressively toward us.

We had been told of some tailless mice supposed



MAP OF THE DESERTA ISLANDS, WITH INSET OF BUGIO

to exist on the island, and we knew that over thirty years before, Baring and Grant had captured a number, not tailless but indeed with thicker tails and other differentiations from the North African mouse. These represented no new species however, but merely local modifications.

We observed possible signs of mice and as we had no commercial traps, tried to improvise some homemade ones. Three or four biscuit and other tins of various sizes were procured from the ship and buried where we could find loose ground back of the hut, where the best "signs" had been found. The boxes were then disguised as well as might be and the tops covered over with a light layer of herbage. Then a bread and cheese bait was laid, crumbs of the same scattered over the pitfalls, larger pieces having been previously placed in the tins.

Probably the adult shearwaters, homecoming at dusk, beat the mice to it. Whatever it was, certainly ruined those traps. The bait in and out of them was clean gone, the concealing herbage was scattered all about, and one tin of about six cubic inches, around which we had piled dirt instead of burying it, had been dragged about and lay on its side two or three yards away.

We never did get any mice, but in the rabbits we shot noticed an apparent local adaptation in the reduced length of their bodies. The heads looked almost hydrocephalic in comparison, not having shrunk from the normal of the species. This, we had been told had been studied and commented on by Darwin who concluded that the "Porto Santo rabbits" represented a newly evolved race. They are now known, however, to belong to a well known Mediterranean subspecies of the ordinary European rabbit.

Rabbits were the only mammals that we secured. The expedition of 1895 reported about twenty goats and refrained from killing any, but somehow these have been long since exterminated as we found no trace of their existence or indeed any trace of their remains.

Next to the shearwater, a pipit (*Anthus bertheloti*) related to the North American titlark, was the commonest bird on the island. We secured several specimens and could have killed many more, as this little bird proved quite tame, running along the ground through the scrub and only rising in short flights when approached too closely.

There were a number of other small land birds,

of most if not all of which we obtained one or more specimens. These included the following: two warblers which may have represented two species, one being larger and having pure white breast feathers, the other having yellow, but this may have been due to sex difference; wheatear, (*Saxicola œnanthe*) apparently rare, only two individuals observed; flycatcher (*Muscicapa atricapilla*) only two observed, but very shy so not necessarily rare; a gray wagtail; a corn crake—only one was seen or secured and later one was seen at Great Piton. These birds flew low and very slowly, legs curiously pendant.

One day Colonel Cossart brought down a hawk—Montagu's harried—with a splendid long distance shot. This was the only bird of prey taken here.

Before taking any of the young shearwater (save temporarily for experimental fights and the like), we looked over a great many. We wanted a good series and to get representatives of as many stages of development as possible, but we did not wish to kill indiscriminately, nor more than could be skinned and used.

When the selection, execution and skinning was complete, the midship mess was treated to a very

rare dish. "Rare" is used advisedly—it is a very connotative word. It was perhaps just a trifle unfortunate that up to this point we had not learned that shearwater should be skinned and scraped in preparing them for food. Nearly everyone took a bite—no one took more, except myself. I ate all of mine beneath a look of revolted astonishment on the part of the Colonel. But then I can eat anything. It is perhaps my most valuable asset as an expeditionary. I have eaten dog and snake and seal, though I promise never to order them if they should appear on Sherry's menu.

Smaller heron, some, at least, pure white, and egrets so we believed, were several times seen from the vessel when we were coming ashore. They were most wary and carefully kept out of range.

Terns, of which we secured three specimens, presented a charming color scheme with brilliant red legs, feet and beak, contrasted with white throat, breast and neck and a somber black patch on the head.

In Funchal we had been assured that lizards were to be found in numbers only on the northern side of Great Salvage. In the first day or two we had found under a stone only one dark colored

Gecko-like lizard, so I set off across the hot, flat, moor-like table-land to try what luck. There were many rabbits living in holes under the edge of the cliff but nary a lizard to be seen. Later they were found in considerable numbers at the extreme *Southern* edge of the island, all apparently of the same species and all very shy; we only took a few specimens. No other varieties of reptiles were remarked.

Those were days of hard work on Salvage, days on the top in the scorching sun—and nights of labor too, when slow and inept, we labored in the stifling laboratory till one or two o'clock. But any unpleasantness of those hours has now faded; only stands clear in retrospect the arrival at the south headland, when pausing only a moment to rest, we scrambled down to the cove and presently sliding off some smooth rock ledge, relaxed hot, tired bodies in the cool blue and green patched water.

In the evenings after our swim as we were going out to the ship in the launch, we would meet the parental shearwaters coming in from their day's fishing, prepared to regurgitate some of their half-digested catch into the gaping bills and hungry stomachs of their little ones.

We required but few adult birds, and since the Colonel was so accurate with his gun and so keen to shoot, we always allowed him the honor on these trips. He would invariably pick out a bird which flew so close as to make "following" it a seeming impossibility, or select one so high up as to be apparently out of range. Any suggested criticism of these attempts—which were nevertheless usually successful—met with the invariable reply: "Its sure I won't kill it if I *don't* fire."

Once a winged bird dropped just abeam of the launch. Circling, we gathered it in, mindful of its mean beak, with a quick toss which landed it in the fore part of the launch. Soon another bird was dropped and as Georges was maneuvering to get close alongside, he suddenly uttered a piercing scream, dropped the tiller and devoted all his interest in the direction of his legs. The first shearwater had made its way aft and was assaulting Georges' bare calf with rapid and efficacious lunges.

At the Desertas my embarrassment had been great when, trying to dynamite for fish, all contacts having been made with what seemed great perfection and the boat carefully backed away to safety, no detonation followed on the turn of the hand dy-

namo. Three charges were tried there, but without explosion. The caps had gone off all right, shattering the sticks, but without exploding them. In Gibraltar explosives had been acquired through intricate, diplomatic, international ramifications. Those we used at the Salvages were obtained from one whom we believed to be a scoundrel—and who was—but the dynamite worked.

It was good to see the Colonel show about one-tenth of one degree excitement when our first submarine charge went off at Salvage. He'd become so used to nothing happening at Deserta that when a couple of thumps banged on the bottom of the boat he looked as nearly surprised as he could—even more than when I ate the young shearwater.

Our catches were, if anything, less in quantity than in the Mediterranean, but of more interest in variety of types and brilliancy of color. The *peche verde*, of a lovely grass-green shade, save for an orange stripe near the head, was particularly beautiful. Once we raised a peculiar starfish and another time a revolting-looking sea-centipede came to the top. It had no head or tail or eyes, just a multitude of evil-looking sucker legs, and was the color of death.

But our most interesting "fishing" came when one night we set, at the mouth of the cove, the net which the Colonel had brought along. This net consisted of three sections, the webs of which were woven in increasing degrees of smallness, the idea being to catch as many sizes of fish as possible. It worked splendidly—in some ways. In the morning when we came to heave it in it was certainly laden —and snarled. Great numbers of dog fish chasing their embarrassed prey had evidently created a fearful chaos. Nearly all the fish were dead or dying, caught in meshes too small for them, in their effort to elude their pursuers. These in turn had become entangled, but due to greater vitality were in most cases somewhat alive. No little time was spent in unraveling the net and extricating the fish, but when this was finally accomplished we had a fine haul, sufficient to feed all hands for several days, even after the twenty-five or thirty dog fish had been thrown back into the water. They had mussed things up, but no doubt had greatly augmented the size of our edible catch.

The Pitons

As may be gathered simply by consulting the

chart, it was necessary to anchor almost out of sight of land at Great Piton. As the tide was low, though still ebbing when we sought a landing, the dinghy came to rest at a still considerable distance from land. The rest of the way we first waded and then scrambled over lava ridges to real land.

From where the landing was made the only eminence on the island lay to the west. The hill was capped with a sea lion in rock, scolding its child. Toward this, through nearly knee-high grass from which issued quantities of grasshoppers, we made our way.

At the rocky summit of the hill were a few desirable nesting holes, but all were entirely empty, with the exception of one containing half an egg shell, which, seen from below, had tempted our ascent.

From the moderate height of this summit the rest of the island looked as flat as a pancake; the *Wawaloam* appeared to be miles off. To the west lay Little Piton, now, at low water only a jumbled mess of ridges. So far has erosion gone in recent years that when the tide is in nothing can be seen of this but one little pinnacle, still resolutely defying the swirling seas.

Baring and Grant speak most enthusiastically of the flowers of this island, referring especially to the *Pedosia*, a straggling trefoil supposed to be peculiar to the island. It may be that this flowery condition still exists in the Spring months, but if so, it was curious that we were unable to observe any indications of plant life.

Continuing along the northern shore, a pipit was scared up, and later we secured a warbler. These were the only land birds observed during our stay.

Arrived at the western extremity of the island we found a cove, the head of it quite sheltered by land, offering a good landing place if the labyrinth of outlying rocks and reefs could be successfully navigated.

As we were returning to the boat we noticed two or three graceful little birds running on ahead of us in the manner of sandpipers. Two were shot and proved to be turnstones, of which Gordon had secured one specimen at Bugio.

The tide had been going out during our absence, and when the boat was sighted, instead of being about an eighth of a mile out, it was about that distance from the water, high and dry on the lava ridge. At first we were inclined to be extremely

put out with Georges, but we soon found that he had had the foresight to prepare for this eventuality and we had little difficulty in getting the boat to the water, using the oars as skids.

The following day we tried the westerly cove and managed successfully to wend our way amongst all dangers to the beach. A little distance in lay a considerable patch of fairly sizable stones and amongst these we found many lizards running about. They were by far the wildest of any we had as yet encountered, and we found it impossible to secure any by hand, and indeed to get any with a gun was a matter of combined luck and quick shooting.

Toward the southwest corner, which, except for the hill was the highest part of the island, we found the remains of excavations with a trench which had evidently been made to let in the sea, probably with the idea of enlisting the assistance of the tide in digging. No doubt this was the work of the *Alert* in '89, which visited the island in search of Captain Kidd's treasure.

At the time of Kidd's trial and hanging at Execution Dock in London in 1701, one of his sailors turned King's evidence and told of treasure buried

on this island. As a result, three or four expeditions have searched there, but so far as is known, without any success.

Many large pools of land-locked water had been left along the south shore by the receding tide. In one of these could be seen a considerable number of fish, so we laid a charge but to our disappointment only secured three specimens. The only way we could account for this was that probably the others were species without swimbladders, thus being immune from the effect of the detonation.

With considerable caution we gathered in a large red sea urchin as big as a good-sized cantaloupe and with spikes five or six inches long. When this creature had been but a few minutes in the bucket, the water turned the color of pale red ink.

As we were all in bathing suits, we took advantage of the half tide and comparative calmness of the sea and waded cautiously out amongst the rocks. Coming to a smooth, flat bottom, we advanced along its slippery surface, hoping to have some sport in the breakers. We did—by the simple process of walking off the edge into a depth well over our heads. Crossing over to the north side we found the breakers running in most tempt-

ingly and had quite an exciting swim here. The waves were so strong that on the treacherous bottom a foothold could not be maintained against them, so that when hit, it was necessary to relax and maintain as horizontal a position as possible, in order not to be banged against the rocks as the waves swept shoreward. As it was, we were really quite fortunate to have escaped with only a few scratches on knees and elbows.

Occasionally whimbrel, a bird similar to but smaller than the curlew, would flash by, usually just over the water's edge and sometimes we would come upon them suddenly in rounding a boulder, but they were very wary and extremely quick, and at sight of us would immediately fly off, giving their wild and plaintive note as they took wing. Two specimens were secured, however.

We secured a few small lizards and some unimportant Coleoptera, but on the whole did not feel that the fauna here justified us in spending a greater amount of time.

Back on board after sunset, we hove up anchor and sail, and with a fair wind rounded the eastern end of the island, shaping our course once more for Madeira.

Only pausing here regretfully to part with Colonel Cossart, for the last time we drew out of the harbor of Funchal.

As the white houses on the slopes were diminishing into polka dots and the gorgeous mountain tops dimming into a soft haze, our attention was called to a little bobbing steamboat evidently pursuing us, and to judge from the puffs of steam that could be seen though not heard, trying to signal us.

We hove to, and as the boat got nearer we could see that it was the Colonel's tug with every flag she possessed streaming, and Colonel Cossart himself standing in the bow, sunhelmet in hand. The tug circled about us, expressions of best wishes and kindest regards passed back and forth, then sheets were eased, the *Wawaloam* was put back on her course heeling a little as canvas filled, the tug headed about and was soon but a speck on the deep gray-green silhouette of Madeira.

For the beckoning finger pointed northward, back "in amongst the haunts of men." Farewell to the forgotten islands, gentle and kindly, or fierce and repellant. No longer can we visit their hospitable shores or scale their rugged cliffs to the frowning brow; no longer loll on painted oceans

or through frothing seas slip into some dark, mysterious cave.

As land changed to purple haze, we seemed to hear again above the boom of the sea on Great Piton, the long mournful cry of the whimbrel as they circled over wave and shore.

THE SCIENTIFIC RESULTS OF THE CRUISE OF THE "WAWALOAM"

By Robert Cushman Murphy (D. Sc.)

Curator of Oceanic Birds, American Museum of Natural History

FROM the point of view of a naturalist, this Mediterranean is a very well-known body of water. In one part or another of this historic sea the scholars of Europe have labored from the dawn of the scientific period. Ages before them, indeed, Aristotle, Lucretius, and other chroniclers of early civilizations described to various purpose many of the inhabitants of its depths and shallows. In its seemingly tideless waters are found the forms of life which have become classic either through their place in epic and myth or because they have formed the vital stuff from which so much of the structure of modern biological science has been built. Here flourish the sea horse and the Triton's horn; here, on sandy shores, lies the torpedo ray, armed with a mysterious storage battery of a sort which man has been so tardy to devise for his own uses. Here, in a

form not quite recognizable from its sculptured profile, is the dolphin, friend of Hellenic mariners; and here, too, the humble lancelet which, under its bookish name, *Amphioxus*, has assumed a remotely ancestral rôle to every student who has taken a course in elementary zoölogy. And so on down the list of creatures which have become the Water Babies of our western tradition—the starfishes, sea urchins, sea anemones, sea cucumbers, cuttlefish and octopuses; the snails, scallops, pinnas, prawns and crabs; the hydroids, corals and pearls—most of these, and many more, doubtless first found their way into the hands, languages, and written records of our forefathers from the waters of the sunlit Mediterranean. So, too, the sea-things of Scripture, from the sponge to Leviathan; and even the anonymous being responsible for the primordial mermaid legend perhaps disported in Mediterranean waves in the actual person of a monk seal!

The beginnings of modern oceanographic work in the Mediterranean were made during the years 1706–07 by a Bolognese soldier, Count Luigi Marsigli. A train of scientific expeditions, equipped with progressively better methods and apparatus, have followed this pioneer, reaching a culmination

in the admirable Danish investigations of 1908–10, under charge of Dr. Johannes Schmidt, the same savant whose popular fame rests on his solution of that immemorial secret, the life history of the eel.

In the field of marine biology, a distinct epoch began with the founding of the great station at Naples by Dr. Anton Dohrn, in 1874. Here students from most enlightened countries have conducted researches of far-reaching effect, and have subsequently carried the system of the Naples Laboratory into educational institutions in all parts of the world. Here, too, is maintained an aquarium in which the multifold life of the Mediterranean may be seen by all visitors under conditions which more or less simulate the natural environment. The Naples Station, moreover, has been the foster parent of lesser organizations of similar aim which have since been established by various governments or universities at Cagliari, Villefranche-sur-Mer, Tamaris, Marseilles, Cette, Palma de Majorca, and other favorable points on the shores and islands. No doubt the activities of the late Prince of Monaco are traceable in part to the same source. Much of the Prince's marine exploration was carried out in other regions of the globe, but in 1910 he dedicated

at Monaco the beautiful Oceanographic Museum, the only complete institution of its kind, and headquarters for the study of oceanic science in every aspect.

In the years 1884–93 Carus brought out his voluminous Latin catalogue, Prodromus Faunæ Mediterraneæ, which lists the 546 species of fishes and the thousands of invertebrates then known from the waters of the sea. Since that date, knowledge of these and of additional organisms has been enormously extended. Zoölogists of many nations have amassed collections along practically all coasts from Gibraltar to the Levant, besides which the Italian fishermen are quick to seek an assured reward by sending to the Naples Laboratory any rare or unfamiliar creature which falls into their grasp. In the sphere of terrestrial zoölogy, British and German entomologists, conchologists, ornithologists, mammalogists, etc., have thoroughly combed the Mediterranean and neighboring Atlantic island groups, while botanists of France and other countries have published elaborate monographs on their flora.

Now in view of these facts, it might be asked why naturalists from the United States should go

sailing about the Mediterranean with the hope of any higher achievement than a delightful cruise? What results of permanent or universal value may one aspire to gain from a brief summer sojourn in such well-seined and much-studied waters?

The answer to these questions is that the Mediterranean region possesses its own distinctive fauna which, however familiar to Old World zoölogists, has never been well represented in museums on the American side of the Atlantic. Speaking as a member of the staff of the American Museum of Natural History, I may say that the cabinets of that vast treasure house are far richer in specimens from the polar zones, Australia, South America, central Africa, or the Fiji Islands, to name but a few remote parts of the world, than they are in material from the cradle of European civilization. Before the cruise of the *Wawaloam*, in fact, a student in search of even one or two examples of the commonest Mediterranean fishes or sea birds would probably have gone through the Museum catalogues in vain. If he were seeking marine shells, or insects of certain popular orders, he might have fared slightly better, for it has long been the custom of specialists in these groups to strive for the acquisition of col-

lections illustrating the fauna of the entire world. The labor and expense of acquiring properly prepared bird skins, or fishes preserved in fluid, on the other hand, has prevented most ornithologists and ichthyologists from going outside a local field in building up the private collections which are almost invariably the bases of great institutional collections. It is natural, moreover, that the museums of the United States should have directed their efforts toward the frontiers of settlement on our own continent, and afterwards into still less known parts of the earth, where a larger proportion of new discoveries might be expected.

To a taxonomist, or worker in the field of zoological classification, however, the need of Mediterranean material becomes increasingly important as collections from other parts of the world approach completeness. It so happens that many of the early naturalists, such as the immortal Linnæus and his successors, based the original descriptions and scientific names of a host of warm-water organisms upon specimens taken in the Mediterranean region. In technical language, therefore, Mediterranean specimens of all such forms are "topotypes." They serve, in a sense, as standards of their respec-

tive species, just as a certain bronze rod preserved in the Tower of London serves as the standard of an English unit of measure known as the yard. Theoretically, every yardstick in the world is subject to comparison with this criterion, beyond which there is no appeal. Both theoretically and in practice, every natural history specimen to be identified is subject to comparison with the "type specimen" of its kind, or at least with a topotype.

It is obvious that living organisms vary much more, and are more difficult to define, than any mere unit of measure. Furthermore, the species, the only zoölogical unit generally recognized by naturalists in the days of Linnæus, is now known to break up, as one of the expressions of evolution, into various geographical forms or races which are termed subspecies. In the older and less critical times, before the concept of subspecies had arisen, the descriptions of plants and animals were made more casually and with less exactitude than they are in our own age. For example, the published diagnosis of a Mediterranean fish drawn up in the early years of last century might prove to apply equally well to a specimen captured on the west coast of South America. In the absence of a

Mediterranean topotype, the South Pacific fish would therefore have to be listed provisionally under the old name, although a modern ichthyologist could hardly avoid suspecting that comparison of specimen with specimen, instead of with the text of an ancient book, would reveal his find as a distinct subspecies, if not even a different species. Some forms of life, to be sure, are of practically cosmopolitan distribution, but the likelihood of differentiation always exists when such expanses of varying oceanic zones are involved.

The same conditions apply in other branches of the plant or animal kingdoms. The student of classification requires above all else material from the type locality, which is the exact or approximate spot on the surface of the globe at which the type specimen of the species was taken.

The position of the Mediterranean region with relation to the great meteorological belt of westerly winds to northward, and that of the trade winds to southward, is responsible for a combination of climatic and hydrographic effects which has taken on a generic meaning. Thus we speak of the Californian coast as having a "Mediterranean" climate. The rainfall régime of such regions is alternately

Looking Down from the Highest Sea-cliff in the World, 4000 Feet Sheer, at Madeira -- Dr. and Mrs. Murphy on Top of Dragonera -- The Peak of Dragonera

that of the westerlies and that of the trades. In winter, when the zone of westerlies has moved equatorward, brisk breezes and moderate rainfall prevail. In summer, when the trade-wind belt moves poleward, a period of mild, dry, and nearly continuous fair weather sets in.

These "Mediterranean" districts are all on the western borders of the continents, and, with the exception of the Mediterranean basin itself, they are exclusively coastal. There, however, the eastward projection of the huge landlocked sea, the mountainous walls to northward, the depth of the submarine trench coupled with its shallow entrance, all tend to enhance and extend the influences, and to produce winter temperature ranges which are disproportionately mild for the latitude. The oceanic environment of the Azores, Madeira, the Canaries, and other insular groups west of Gibraltar and north Africa is not dissimilar to that of the shores of the inland sea. Geologically, botanically, and in other respects, moreover, these islands share many resemblances with the Balearics and with other archipelagoes inside Gibraltar. Incidentally, they are all situated within the scope of the hypothetical Atlantis.

The whole Mediterranean area may be called "temperate" in the fullest sense of that rather loosely used adjective. The term applies not alone to weather, but even more to the make-up of the marine animal life, including sea birds as well as the subaqueous creatures. To choose the fishes by way of example, the Mediterranean assemblage, together with the fish fauna of the adjacent portions of the Atlantic, is unlike anything we know on the eastern seacoast of the North American continent. In our region we may be said to have boreal fishes and tropical fishes, the two elements coming into contact off the shores of New England and the middle Atlantic states. Almost entirely missing are the essentially temperate groups of fishes which are found in the Mediterranean region and along analagous parts of the west coast of both Americas.

The remote origin of the distinctively temperate fishes may, indeed, have been intertropical, and the Mediterranean is even now the home of many out-and-out warm-water organisms of wide distribution, and of others having affinities with equatorial latitudes rather than with the northern oceans. But the superficial associations of human seasonal movements, which are prone to make us link up

the Riviera with our own subtropical winter resorts, such as those of Florida or the Bahamas, lead to all sorts of false analogies. Because of the prevailingly dry air over the Mediterranean, the sunlight is actually more powerful than in many parts of the tropics, and yet the Mediterranean is by no means a tropical sea. Some of the oceanographic agencies which serve to give it at least a semitropical aspect should now be briefly considered.

To begin with, the water of the Mediterranean is relatively warm and the total annual range of temperature is surprisingly small. The surface water is never colder than 54° F., nor warmer than 81° F. Off the northeastern coast of the United States, by way of contrast, the seasonal range in temperature extremes at the surface is from 27° F. to 83° F. Even at great depths in the Mediterranean, the temperature remains constantly in the neighborhood of 55° F., which is very much higher than that at the same level (approximately 1500 fathoms) in the open ocean. The shallow threshold at Gibraltar effectively bars out the deeper and colder waters of the Atlantic, the influx being confined to surface layers which have been more or less heated by the sun. From the nature of this re-

plenishment, and the absence of inflowing cold currents, it follows that the depths temperatures of the Mediterranean, as determined by the sinking of surface water, cannot be lower than the lowest value occurring in the uppermost layer during the coldest season of the year.

Such is the foundation of the temperate character of Mediterranean waters. As a corollary, we find the native marine organisms very delicately and sensitively adjusted to a narrow range of temperature extremes. In the unheated aquarium tanks at Naples, a brief spell of exceptionally cool winter weather will sometimes kill an entire school of healthy Mediterranean fishes merely by lowering the temperature of the water a trifle below their level of resistance, which means below the minimum of their normal habitat.

The inflowing current through the Strait of Gibraltar is due to the fact that the supply of fresh water from rainfall and rivers within the Mediterranean does not compensate for loss from evaporation. Indeed, this loss (estimated at 1250 cubic miles per year) is more than double the fresh water increment. The amount of incoming Atlantic surface water, however, is vastly in excess of this

difference, and is balanced by an outgoing undercurrent. In accordance with physical circumstances due to the eastward rotation of the earth, the trend of both these currents is toward the right, so that the warm surface stream moves eastward along the Moroccoan coast, while the deep, emerging current follows the European shore and can be traced to parts of the ocean southwest of Ireland.

Our first experiences with Mediterranean water temperatures, which seemed far from tropical after the warmth of the summer atmosphere at Nice and Monaco, came when we left the latter port on July 12th. Thermometers lowered into the sea at frequent intervals during both day and night showed ranges of from 67° to 68° F. The relative coolness was due, apparently, to upwelling, for Alpine winds had been whipping up the northern border of the sea to the westward of Italy, driving the surface water southward so that its place was taken by colder water from below. Four days later, we suddenly encountered a change which I have already described as follows:

"Now, when after a comparatively fair day's run, the schooner arrived one quiet morning

fifty miles northwest of the nearest point in the Balearic Isles, we had an opportunity to observe something of the little understood vagaries of the sea and of the creatures which seek their own demarcated realms within it. During the night the surface temperature had risen from 68° to 75° F., a seemingly slight difference to the landsman who thinks in terms of atmosphere, but strikingly apparent when we plunged over for our daily calm-weather swim, and still more so when we observed what was going on about us. Perhaps we had entered a warm local current; perhaps we had merely passed beyond the zone of upwelling. At any rate, small flying fish, which had certainly not been in evidence in the cool water along the European coast, began to scud from our stem. Bonitos, leaping a man's height into the air, were in hot pursuit, and lines were quickly paid out to tempt them. Dolphins or dorados, too, loafed below in the ultramarine shadow of the hull, their fins shining as sidelights of purple fire. Unlike the bonitos, they declined to be interested in either bait or spoon, and I recalled that the only time I had ever hooked

and landed one of these wondrously opalescent fish was when running before half a gale in the South Atlantic. Sea insects—true oceanic bugs —jerked along the surface and, finally, the first shark, which may or may not have had any relation to the increase in temperature, swished past us with fins exposed."*

One of the outstanding features of the Mediterranean region is the great variety rather than the great abundance of marine life. Contrary to popular opinion, it is the cooler waters of the ocean which teem with living organisms. This is due to a variety of causes, among which is the fact that the ultimate food substances upon which the microscopic sea plants subsist are to be found in maximum profusion only in waters of relatively low temperatures. Again, coldness slows up metabolism, or the "rate of living," to a greater extent than it retards development and growth; this means that a larger number of successive generations of plants and animals live contemporaneously in the cooler parts of the sea than is the case in tropical

*"A Cruise to Majorca." *Natural History*, XXVI, pp. 552–569, 1926.

or warm temperate regions. The warm-water creatures live "faster" lives; their death rate is higher in ratio to the increase of their descendants. We find, to be sure, more *kinds* of life in the warm seas, but for sheer numerical abundance of individuals we must seek the open oceans of high latitudes, or coastal zones where cold currents prevail. To a naturalist familiar with the teeming waters of the Labrador Current, or the Humboldt Current which bathes the west coast of South America and extends well into the tropics, the Mediterranean, with its bland surface waters and the deficiency of oxygen and excess of carbonic acid in its depths, is bound to seem a relatively depauperate sea.

Nevertheless, the number of species inhabiting the Mediterranean basin is so high that under exceptionally favorable circumstances the water may appear crowded with life. In the Strait of Messina, for instance, strong currents swing through shallow confines, and all the organisms which are commonly distributed through layers of considerable thickness are crowded into the surface waters. For such reasons the district has become one of the most famous of collecting grounds.

Moreover, a large proportion of the creatures

make vertical migrations which at times bring them to the surface in incalculable numbers. Many of the fishes, squids, and jellyfish go down in rough weather, or during periods of bright sunshine, into the still twilight of deep water, returning upward during tranquil, overcast days, or on windless nights. At such times species related to the huge medusa which we encountered in Alcudia Bay sometimes gather so thickly that they are said to impede the progress of ships, or even to cause an oar to stand upright if it is cast overboard. During the cruise of the *Wawaloam* we not infrequently observed, toward sunset of calm afternoons, swarms of smaller jellyfish mingled with sea butterflies, long strings of salpæ or tunicates, conspicuous because of their reddish kernels, and various other nearly transparent beings which make up so large a part of the population of the sea.

But we have gone far enough with these generalities. The cruise of the *Wawaloam* was made with several specific objects which were only indirectly concerned with the oceanographic and biological conditions of the Mediterranean Sea. The first and most important of these was the capture of one or more specimens of the famous monk seal, of which

probably not a bone, nor a hank of hair, were to be found in any museum of the United States. The second purpose was to obtain a series of certain sea birds which are partly or exclusively native to the region, as well as some of the endemic terrestrial species of the Balearics and neighboring islets. And the third was to collect as many as possible of the historically important Old World temperate fishes, which, as previously indicated, were up to the time lacking in American repositories, or at least in the American Museum of Natural History.

The seal was not found within the Mediterranean, and it is uncertain to what part of its once extensive range it still clings. Within recent years it has been occasionally reported in corners of the Adriatic and near rocky islets along the coast of Tunis, but at the Balearics we found not even a tradition of its former known presence. The taking of three specimens, representing a whole family, at one of the Desertas Islands, after my departure from the *Wawaloam*, has already been described by Mr. Metcalf. In due course, these may all be seen in the semblance of life in the Oceanic Hall of the American Museum.

Monachus albiventer, as this mammal is known,

is a rather generalized type of phocid seal (*i.e.*, the true seals as distinguished from sea lions, fur seals, etc.), and is a member of a genus confined to warmer ocean waters, in or close to the northeast trade wind belts of the Atlantic and Pacific Oceans. There are no other strictly subtropical seals than the three species of *Monachus*, for the pinnipeds which inhabit islands off the west coast of the Americas dwell in an environment of cool water, even though their range reaches equatorial latitudes. The second species of *Monachus* is the nearly extinct Caribbean seal, which began to be hunted for its oil not long after the first voyage of Columbus. The third is the Laysan seal, likewise on the verge of extermination, but possibly still occurring in very small numbers at a few islets to the leeward of the Hawaiian group. The distribution of the three members of this genus is very illuminating when considered in relation to former open waterways between North and South America.

The Mediterranean monk seal was mentioned by Aristotle, and its hide was regarded by the Romans as a protection against lightning! Suetonius states that such was the dread of thunderbolts felt by Cæsar Augustus that he never traveled without his

seal skin. Whatever may have been known or believed of the animal in ancient times, it is exceedingly difficult to find recent information of a trustworthy sort. No large and important mammal seems to be less well known. A few living examples have reached zoloögical parks since 1778, when Buffon described the intelligence, friendliness, and something of the habits of captive Adriatic monk seals which he had observed. To-day the last known stronghold of the dangerously reduced species is on the rocky outliers of Madeira, where, let us hope, the Portuguese Government will grant it strict sanctuary.

The Mediterranean seal proves to be an animal of far more striking appearance than its rather drab Caribbean cousin. The male of advanced age captured by Mr. Metcalf has a slaty black dorsal surface, and a mottled throat covered with the scars of many disagreements with rivals. On its sides are large shield-like white patches, with their pointed ends toward the tail. These marks are continuous with one another across the belly. The greenish-gray female has all creamy-white underparts, and brightly dappled flanks, neck, and shoulders. Her cub, of velvety blackness, shares

the white shield pattern of the male. The stomach of the female was crammed with partly digested fish, and contained also nematode worms of the genus *Contracæcum*, such as are normally parasitic in practically all adult seals.

The Mediterranean is the home of a small number of species or geographic races of sea birds which have been represented insufficiently, if at all, in the American Museum of Natural History. From the different clusters of islands, both within the sea and to southward and westward of its entrance, a surprising number of endemic forms of northern land birds have also been described by European ornithologists during recent years. Crossbills and kinglets, for example, birds which we usually associate with the evergreen forests of high mountains or high northern latitudes, breed at Majorca. The native crossbill does not confine itself to the sierra, as does the peculiar species of Santo Domingo, in the West Indies. On the contrary, its nest has been found at sea level, near Alcudia Bay. The explanation lies in the presence of the Aleppo pine, the seeds of which furnish the crossbill's food. The ancestors of these interesting finches may have reached the Balearic Isles during a time when

northern Europe was covered with Ice Age glaciers. Their long continued residence, however, demonstrates that food supply may be far more important than what are loosely called "climatic factors" in explaining oddities of present-day distribution.

The resident avifauna of the Balearics is almost entirely European, rather than African, in character. Of the 102 kinds of birds which breed at the islands, about twenty are endemic, that is, they occur nowhere else. Space does not permit further consideration of them, but interested readers are referred to the publications of Dr. von Jordans and Captain Munn.*

Among important Mediterranean marine birds is the typical race of the great shearwater, *Puffinus kuhlii kuhlii*, which has other subspecies in different parts of the world. One of the latter is a larger form known to Americans as Cory's shearwater (*Puffinus kuhlii borealis*). This bird was originally described from Cape Cod, but it is now known to nest at the Azores, Madeira, and the Canaries. Still another geographic phase of the same species is the

*A. von Jordans, 1925, *Journal fur Ornithologie*, LXXIII, pp. 194–207; P.W. Munn, 1925, *Ibis*, pp. 39–47; and the earlier and longer contributions cited in these two articles.

very small Cape Verde Island shearwater (*Puffinus kuhlii edwardsi*). A fourth form inhabits the southern Indian Ocean. Working in the past on the variation and exact distribution of these related races, I have been hampered by the lack of topotypes of *kuhlii*, which was first described from the coast of Corsica and which breeds, so far as we know, only at islands within the Mediterranean Sea. Off Minorca and Dragonera, Mr. Metcalf and I had the pleasure of collecting an adequate series of this bird, as he has already related. Other species of particular value from an American point of view, obtained about the Balearics or at the Desertas and Salvages Islets, are the following: stormy Petrel, (*Hydrobates pelagicus*); Leach's Petrel (*Oceanodroma leucorhoa*), a male in breeding condition, near the Balearics, July 16; Fea's Petrel, (*Pterodroma mollis feæ*), at Bugio; Mediterranean yellow-legged gull (*Larus cachinnans*); Mediterranean shag (*Phalacrocorax graculus desmarestii*).

Many other kinds of land and sea birds, all worthy of mention, were collected during the short voyage of the *Wawaloam*, but I must close this subject with a reference to one of the most fascinating of them all, namely, Eleonora's falcon, a rare

and beautiful hawk which is peculiar to islands of the Mediterranean region. As described from my notes published in "Natural History," this bird is

> a glorious little freebooter, related to our American pigeon hawk but with longer, sharper wings, shaped almost like those of a swift. At Dragonera, we saw as many as a score of them together, and became acquainted with their marvelous aerial displays. On the updraft of the sea breeze, the falcons would glide along the brink of the Gibraltar-like cliff, and, suddenly half-folding their wings, they would hurtle toward the sea. Three, five, six, or seven hundred feet—a quick eye was needed to follow that breathless plunge down the vertical fault scarp. Sometimes it seemed as though the living darts would be swallowed among ripples which were in reality great billows breaking at the foot of the wall. But at the critical moment, the falcons would scale forward, to float again toward the heights and perhaps to repeat the dive. Clearly this performance was carried out with no other object than the joy of it. There was no food for the

birds on the sea face of the islet. The full stomach of a specimen collected contained only remains of orthopterous insects, probably the grasshoppers which were abundant among the asphodel and warped bushes on the landward slope of Dragonera. Eleonora's falcons, however, have the reputation of being bird-eaters, and their gift for dashing speed supports this. At this late season they were just beginning to nest upon the sea cliffs of the Balearics, which is probably shrewd Nature's scheme for assuring a plentiful larder of northern songbirds, in autumn migration across the Mediterranean, at the very period when nestling falcons are most insatiable.

The fishes of the expedition, which have been identified by Dr. N. A. Borodin of the American Museum of Natural History, make up the most precious of the zoölogical spoils, next to the monk seals. They number only about fifty species of the total Mediterranean ichthyofauna of 546 species tabulated by Carus, but they include many of great scientific and historic important. Furthermore, the fact that they are chiefly rather common forms

is of all the more interest to an institution which had hitherto possessed practically no Mediterranean fishes.

Of the 79 separate lots of specimens preserved, 68 were obtained within the Mediterranean Sea, mostly at the Balearics, Columbretes, and Alboran, and 11 at islands between Madeira and the Canaries. It is significant that no difference is apparent between the fishes of these two districts except in the case of a tropical pomacentrid, known as *Glyphiso don luridus*, from the Salvages, which has never been reported from any part of the oceans north of Madeira. In all other respects the Mediterranean and the outlying neighborhood of the Atlantic appear to constitute an identical zone.

The collection comprises many generic and specific types described by the eminent European naturalists of long ago, such as Linnæus, Cuvier, Valenciennes, Risso, and Prince Bonaparte. It includes representatives of the following families: pipefishes (*Syngnathidæ*), lizard fishes (*Synodontidæ*), hakes (*Gadidæ*), cusk eels (*Ophidiidæ*), soles (*Soleidæ*), pomacentrids (*Pomacentridæ*), wrasses (*Labridæ*), sea basses (*Serranidæ*), goat

fishes (*Mullidæ*), porgies (*Sparidæ*), gurnards (*Triglidæ*), scorpion fishes (*Scorpænidæ*), viper fishes (*Trachinidæ*), star gazers (*Uranoscopidæ*), croakers (*Sciænidæ*), gobies (*Gobiidæ*), silversides (*Atherinidæ*), and mullets (*Mugilidæ*).

The composition of the assemblage substantiates remarks made near the beginning of this chapter about the essentially temperate nature of the Mediterranean. For instance, the *Pomacentridæ* are a distinctly tropical family of widely distributed reef-fishes, and only a single form of the whole group occurs in the Mediterranean. No less interesting is the fact that this pioneering member, the small black, blue, and gilded swallowtail (*Haliases chromis*), proved to be everywhere the commonest fish over rocky bottom.

Among the wrasses (*Labridæ*), the score or more of Mediterranean species, of which the expedition obtained seven, are all of a temperate zone type, differing from the bizarre and variegated tropical forms, and rather resembling or paralleling the familiar cunner (*Tautogolabrus*) of our own Atlantic coast. The outstanding Mediterranean family is that of the porgies (*Sparidæ*), of which we collected a dozen species. These, likewise, include no

typically tropical member, the majority being peculiar to the Mediterranean region. Among fishes of prevailingly tropical type, on the other hand, we find in the Mediterranean several of almost world-wide distribution in warm seas, viz., the dolphin or dorado (*Corypœhna*) and the star-gazer (*Uranoscopus*).

It was a quaint experience at Majorca to find that the native names of the common fishes were those upon which the scientific names had evidently been based by naturalists of a bygone generation. Thus the "serráns" of the Balearic fishermen proved actually to belong to the genus *Serranus*. The "dentón" was a porgy known as *Dentex vulgaris;* the "cántara" another member of the same family called *Cantharus orbicularis;* and so on. It is a relief to learn that at least some of the staggering terms which men of science have saddled upon the millions of living creatures have somewhere a basis in common speech. Doubtless many of the ancient folk names of Mediterranean fishes run practically unchanged through various tongues from Catalonia to Cyprus.

Of the lizards, land shells, insects, and marine invertebrates gathered during our cruise, I must

refrain from writing at length. We found the pine woods of Majorca still abounding in the several kinds of edible snails for which the Romans are alleged to have sent ships during the five centuries before the coming of the Moors in 434 A.D. These, and most of the other lower forms of life, have proved to be new additions to the collections of the American Museum of Natural History.

Mr. Metcalf has told the story of our Majorcan sojourn. To his account I can only add the expression of my keen pleasure in the rediscovery of a mellow island that not only well rewards a naturalist, but where the skeptical traveler may renew his faith in mankind. Much has been written about the sympathetic, friendly, sober, and industrious temper of the Majorcans. Malefactors, we are told, are as scarce as venomous snakes, and of the latter there are none. The islanders are a proud and independent folk who adhere to their own distinctive name and peculiar dialect. The German ornithologist, Von Jordans, records after a long residence that the dyed-in-the-wool Majorcan does not hear well if you call him a Spaniard. Loyalty to the kingdom is unquestionable, but local tradition remembers kings of old who chose a Balearic

throne rather than one in Aragon. During our short experience we found these people always kindly, always dignified, always hard at work. They never failed to welcome us, and they sought no recompense for courtesy.

Vivid in the memory of our cruise is the brief call at the Columbretes Islets, shortly before my regretful departure from the *Wawaloam* at Marseilles. Thither we went in search of the exceedingly rare Mediterranean sea bird known as Audouin's gull (*Larus audouini*), which is reputed to nest there. Whether the gulls had dispersed after the end of their breeding season, or whether they have permanently abandoned these islets, I do not know; our failure to find a trace of them was in any case one of the few disappointments of the voyage. But to glide in the launch across the gleaming shoals of the Columbretes, and to land upon grotesque piles of volcanic ash which seemed so remote from the every-day world, even though they were within sight of the azure coast of Spain, went far to compensate us.

Twenty-seven miles southeast of Cape Oropesa, the pinnacles of the Columbretes lie scattered over a north-south distance of about three miles. Around

them, and southward for some fifteen miles more, stretches the great bank which is so carefully avoided by modern shipping. But it was not always so. Roman triremes, bound toward the Pillars of Hercules, doubtless put into the haven now known as Tofiño, which is looped by the broken circle of Colibre, largest island of the little archipelago. For a thousand years in later times, Saracen marauders also made it the rendezvous and hiding place for which nature has perfectly adapted it.

Colibre, or Columbrete Grande, is apparently the rim of a volcano, and its harbor the drowned crater. Shaped like a capital C, with straight cliffs, and with disconnected waterworn stacks at each of its ends, the island shows a beautiful cross-section of hard, volcanic ash—gray, red, and black—with the last in the topmost stratum. Some of the separated islets resemble great black-topped mushrooms. Here, in the green crater, with the mutter of the sea-caves striking our ears, we fished on a sunny and sleepy afternoon. Two hundred and fifty feet above us stood a sumptuous lighthouse and several stone dwellings, all without a visible sign of life.

Evidently the philosophical Spanish keepers were not to be lured from their siesta by the *Wawaloam* in the offing, or by two intruders in a launch who occupied themselves by exploding silly pinches of dynamite in the pool which had once been Vulcan's blazing forge.

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